The Bowed-Harp

A Study in the History of Early Musical Instruments

BY

Otto Andersson, Ph.D.

President of the Swedish University of Abo

English edition edited by

Kathleen Schlesinger

FROM AUTHOR'S FOREWORD.

THIS work is the result of researches which have been carried on, at intervals, over a period of more than twenty years. I first made the acquaintance of the bowed-harp in 1903, when visiting the Swedish settlements in the Esthonian islands of Ormsö and Nuckö for research purposes. Subsequently I discovered the numerous instruments from the east of Finland, most of which are preserved in the National Museum in Helsingfors.

The bowed-harp had hitherto been unknown to the literature of musical history, and proved to be of great value in the scientific study of musical instruments. At the third International Congress of Music, held in Vienna in 1909, I reported the results which I had so far obtained, and then resolved to make a close study of the history of the bowed-harp, and its relationship to kindred types.

FROM ENGLISH EDITOR'S PREFACE.

DR. ANDERSSON may be heartily congratulated on the successful manner in which he has overcome difficulties and lacunæ in rescuing from oblivion so many data that illuminate the folk-lore and folk-music of Northern Europe, and his ethnological material should prove of profound interest to experts in many branches of knowledge, besides the archæology of music.

KATHLEEN SCHLESINGER.

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WEDDING DANCE TO THE TALHARPA IN ORMSÖ.
From a lithograph by E. H. Schlichting.

THE BOWED-HARP

A STUDY IN THE HISTORY OF EARLY MUSICAL INSTRUMENTS

BY

OTTO ANDERSSON, Ph.D.

President of the Swedish University at Åbo

From the Original Swedish Edition revised by the Author
The Translation Edited with additional foot-notes by
KATHLEEN SCHLESINGER

ONE HUNDRED AND SIXTEEN ILLUSTRATIONS

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FOREWORD.

THIS work is the result of researches which have been carried on, at intervals, over a period of more than twenty years. I first made the acquaintance of the bowed-harp in 1903, when visiting the Swedish settlements in the Esthonian islands of Ormsö and Nuckö for research purposes. Subsequently I discovered the numerous instruments from the east of Finland, most of which are preserved in the National Museum in Helsingfors.

The bowed-harp had hitherto been unknown to the literature of musical history, and proved to be of great value in the scientific study of musical instruments. At the third International Congress of Music, held in Vienna in 1909, I reported the results which I had so far obtained, and then resolved to make a close study of the history of the bowed-harp, and its relationship to kindred types. The bowed-harp seemed to bear a typological resemblance to the much discussed Welsh crwth, and as I thought it might possibly throw some light on the history of that instrument, I visited London, Bangor and Edinburgh in 1913 in order to gain a closer knowledge of the English literature on the history of musical instruments, and to study the Celtic sources. Subsequently I received most valuable guidance from the works of those eminent

scholars, Miss Kathleen Schlesinger, the Rev. Francis W. Galpin and Dr. W. H. Grattan-Flood, and the abundance of material in the Celtic sources has so far extended the scope of my studies that the chapter on the Welsh crwth has become one of the longest in the book.

This work has therefore a close bearing on English musical research, and I am glad that, having been published originally in the Swedish language, it can now be made available to the English public in a revised edition. I wish to express my thanks for help in making this possible to Professor R. P. Cowl, who took the first steps towards getting an English edition issued; Mr. William Reeves, who undertook to publish it in London; and the late Mrs. Mary Stenbäck (née Longman), who made the English translation.

My grateful thanks are due to the English authorities on musical research whom I have named above, for numerous suggestions and much information; to Professor Curt Sachs (Berlin), for friendly help and encouragement; as well as to Professors U. T. Sirelius, Kaarle Krohn and Ilmari Krohn (Helsingfors), also Mr. K. Rob. V. Wikman, Ph.M., and Mr. Arnold Nordling, Ph.D., for help and advice in dealing with different points; to Mr. Arne Jörgensen, Ph.M. (Helsingfors) for valuable guidance in regard to important Celtic sources, and to all the numerous writers on the history of musical instruments, museum officials and librarians, both in Finland and in other countries, who have readily given me information and placed material at my disposal while the work was in progress.

The abundant ethnographical material, most of it previously unknown, has led me to form conclusions on

various points which differ from those already put forward by various writers. I am conscious that there is still much to be said about the problem here treated, and that further light may still be thrown upon it. All I hope is that my work will have carried the discussion one step forward.

The principal aim of my researches has been to bring into the light of day and fit into a place in the history of musical instruments the ancient, forgotten bowed-harp—that peculiar instrument which for many hundreds of years afforded to widely separated peoples that satisfaction and delight which only music—however artless—can impart.

OTTO ANDERSSON.

ABO, 1930.

EDITOR'S PREFACE.

THE name "bowed-harp" given by Dr. Andersson to the little-known bowed instrument of Scandinavia and Finland, which forms the subject of the present volume, may at first sight appear strange, but on reading the work through, readers will recognise the reason for the author's selection of the title.

The task of bringing out an English edition of the results of Dr. Otto Andersson's researches into the history of Northern stringed instruments, has been an interesting and congenial one, even though I am not at one with the author in some of the conclusions he has formed, more especially on the subject of the origin of the bow, and on the question of a possible indebtedness of the Celtic *cruit* and of the Welsh *crwth* to the bowed-harp, rather than to the kithara of Classical and Hellenistic Greece.

This fundamental divergence of opinion as to the proven basis of the evolution of bowed instruments cannot, however, be allowed to weigh in the balance when we take into consideration all the wealth of new material, both musicological and literary, laid before British and Irish archæologists in music in this volume.

All the difficulties and drawbacks by which the author

was handicapped in his investigation should be borne in mind. In the matter of purely Northern sources—including more especially those of Scandinavia, Finland, Iceland and Denmark—he had not at his command anything approaching the rich inheritance of archæology from the Ancient East; from Greece, Hellenistic Asia, Islam, Southern and Central Europe; from treatises on music and from original specimens of the ancient and mediæval instruments themselves, preserved in museums and private collections, sometimes in complete sets, which illustrate each stage of structural development; from monuments, carvings, paintings and illuminated MSS., and from original literary sources in many languages: material, in short, which ranges from several centuries before the Christian era, and through the Middle Ages, in unbroken succession to the confines of modern times.

Moreover, in epic or folk poetry, transmitted by oral tradition, there must always be an element of uncertainty concerning names of objects, and the meaning attached to words and technical terms in different regions and centuries. The exact date, therefore, at which the oral tradition of the Lays, the Kalevala, the Sagas, etc., was first committed to writing in MSS. which have survived; and the extent to which the text has been revised and brought up to date for publication, are of the utmost importance, if any of this material is to be taken into consideration in forming conclusions concerning the evolution of music and musical instruments.

Dr. Andersson may be heartily congratulated on the successful manner in which he has overcome difficulties and lacunæ in rescuing from oblivion so many data that illum-

inate the folk-lore and folk-music of Northern Europe, and his ethnological material should prove of profound interest to experts in many branches of knowledge, besides the archæology of music.

KATHLEEN SCHLESINGER.

Highgate, *August*, 1930.

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THE BOWED-HARP

CHAPTER I.

INTRODUCTION.

An Historical Problem.

THE origin of bowed instruments is an unsolved problem. So said Professor Buhle[1] in 1906, and as recently as the year 1922 Baron von Lüttgendorff said, in the third edition of his well-known work, "Die Geigen- und Lautenmacher": "Whoever knows the history of our modern musical instruments, knows very well that the question of the origin of bowed instruments has not yet received a final answer. It has not yet been ascertained where the first bow was drawn over the strings, or by what route the oldest bowed instrument reached us."[2]

More research has been devoted to this problem than to any other in the history of musical instruments, but however much trouble has been expended, all efforts to find a solution have been in vain. Though different roads have been taken, different currents of civilisation have been traced, different theories have been formulated and tested, and a literally overwhelming mass of material has been brought to light, the result has been only to increase

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[1] Buhle, "Über den Stand der Instrumentenkunde." Bericht über den II. Kongress der I.M.G., page 222.

[2] Von Lüttgendorff, op. cit. page 5.

the confusion of hypotheses. Rühlmann thought more than forty years ago, when discussing questions connected with the subject, that he was faced with chaos.[3] Nowadays one has that feeling still more strongly.

The problem amounts in the end to an enquiry into the ancestors of the violin family, a genealogical investigation concerning none other than the "queen of instruments," and as such it takes an eminent place in the history of culture. At the same time, however, it has come to be a question whether priority shall be accorded to the east or to the west; for the origin of bowed instruments has been traced back on the one hand to the Indian *ravanastron*, which has been thought to be a very ancient bowed instrument, and on the other hand to the Welsh crwth,[4] which, according to Sachs, was known as a bowed instrument at a date when the peoples of the Mediterranean countries were only acquainted with the plucking technique.[5] An important factor in the former hypothesis has been the Arab *rebab*, found along the ancient highway of civilisation through Spain; the west has gained in reputation since the northern *bowed-harp*, the instrument which forms the subject of this book, was brought into the discussion.

If one should define the most important points on which research has been concentrated, they would be the following:

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[3] Rühlmann, "Die Geschichte der Bogeninstrumente," page 12.

[4] The Welsh form *crwth* is used throughout this work, except in a few instances where quotations or direct references have led to the use of the English form *crowd* or the French *crouth*.

[5] Sachs, "Lituus und Karnyx," Liliencron-Festschrift, page 241.

1. The original home of bowed instruments.
2. The age of the crwth.
3. The relation of the crwth to the violin family.

We seldom find these points treated separately, for the sources merge into each other. The questions, though different, yet impinge upon each other, and have consequently been confounded, and more or less space in the investigations has been allotted to each according to the methods followed by the investigators. For the same reason it is impossible for the present writer to make any absolute separation, though he tries to throw the light of research upon each of the questions in turn. The most important thing is to note that the problem consists mainly of these three questions.

It should perhaps also be stated that the object of the present book is not to study the problem as such, but to discuss a special group of musical instruments. It may none the less contribute towards a solution. For this reason it is the writer's duty to give an outline of the problem as it now presents itself in the light of recent research, but at the same time he may be allowed to pass over the details of the arguments for the various opinions.

The scientific discussion of the origin of bowed instruments was in full swing in the eighteen-thirties. It was considered that the evolution of the violin had been completed long before, and the apex of virtuosity reached. These circumstances helped to awaken an interest in the precursors of the violin family, and the position of stability and systematic method to which the study of musical history had attained at the beginning of last century still further augmented that interest. Fétis, who took the lead in the discussion, was one of the most eminent scholars of

the period in the field of musical research. It is true that M. Cartier was the author of the article published in 1828 in the "Revue Musicale," in which the classical Mediterranean peoples' ignorance of bowed instruments was noted as a remarkable fact,[6] but Fétis was the founder of that periodical, the first musical journal with a scientific trend, and wrote in it a number of articles on the history of musical instruments. He also made a weighty pronouncement on the origin of bowed instruments in "La Musique mise à la portée de tout le Monde," which he published in 1830. In this work he found no reason to doubt that instruments with finger-board and bridge and played with a bow are of western origin. The only question was at what date and in what part of Europe they arose. These remarks are accompanied by a reference to the Welsh crwth.[7] In another work, published in 1837, Fétis was still practically sure that the bow was of European origin; this time he connected its original form with the Russian *gudok*.[8]

Kiesewetter also considered it certain that ancient music knew of no stringed instrument played with a bow of horse or other hair, and said that this fact had led some students to the conclusion, occasionally adopted, that the violin must have been brought from the east by the returning crusaders. But in his opinion there was little

[6] "Cäcilia" (Kiesewetter's article), XXII, page 197.

[7] Fétis, op. cit., third edition, page 163.

[8] Fétis, "Résumé philosophique de l'Histoire de la Musique." The writer has not had access to this work. Cf. Engel, "The Literature of National Music," page 70, and Fétis, "Antoine Stradivari" (Brussels, 1856). English translation by J. Bishop, "Notice of A. Stradivari," London, 1864, page 9.

ground for such a view, as the Arab writers of the tenth, eleventh and twelfth centuries who enumerated the Arabs' musical instruments, did not mention any that were played with a bow. According to him, the *kemanche* and *rebab* or *rubeb* were first described in the fourteenth century. After further pointing out that examples of bowed instruments which are of earlier date than the first Crusade occur in western Europe, this author continues: "However, the greatest probability is that the violin originated from the Welsh crwth, being indeed identical therewith in all essential parts, was brought to the mainland of Europe by Irish and Scottish monks, and was probably in use there as early as the fifth or sixth century."[9]

A new view was suddenly broached in the eighteen-fifties. Zamminer, the well-known physicist of Giessen, wrote in 1855 a book on music and musical instruments in relation to acoustics, which attracted much attention. In it he repeated that the Greeks and Romans were unacquainted with the use of bowed instruments, but added that such instruments were altogether unknown in the west until after the arrival of the Arabs. And as the French three-stringed *rebec*, the most usual bowed instrument in the eleventh to fourteenth centuries, recalled the "*rebeb*, *erbeb* and *repab*" of the Mohammedan peoples in both name and form, Zamminer was inclined, in spite of Kiesewetter, to suppose that bowed instruments were derived from the east through the medium of the Spanish Arabs.[10] He regarded the "Javan *rebab*," a two-stringed instru-

[9] "Cäcilia," XXII, 1843, page 198.

[10] "Die Musik und die musikalischen Instrumente," page 41 f.

ment, as the original "from which the viol, then the violin, in short, all bowed instruments, have been developed." He considered this instrument to be of Arab origin, and distributed in both the east and the west.[11]

The year after Zamminer's book appeared, Fétis published "Antoine Stradivari," a monograph on the famous violin-maker, with an historical introduction dealing with the origin of bowed instruments. By this time Fétis had completely changed his mind, though probably not through any influence from Zamminer. As has been stated above, he had at one time referred to the Welsh crwth as a possible ancestor of the violin group of instruments, and at another time he had adduced the Russian *gudok*. He had now thoroughly investigated the Welsh crwth and its predecessors, and had come to the conclusion that even the simplest kind of crwth was too complicated to be an original form. So regularly constructed an instrument, he thought, could not be the direct product of an undeveloped people living in a severe climate.[12] He had looked about for the original source, and found it in—India. "If we wish to trace a bowed instrument back to its original source, we must seek it in the most primitive form in which it can be found. Such a form we find in the ravanastron."[13] Fétis declared that the *gudok* was also of Oriental origin, and he even repeated without reservation the sentence: "There is nothing in the west which has not come from the east." He seemed to be quite sure that this remark was applicable to the history

[11] Zamminer, op. cit., page 379.
[12] "Antoine Stradivari," page 13 f.
[13] Op. cit., page 2 f.

of bowed instruments. But although he regarded the *rebab* as a relation of the *ravanastron*—through the *omerti (t'i kin)* and *kemângeh*—he does not seem to suppose that the Moors formed the only connecting link between the Indian instrument and the crwth. He conceived a more direct mode of transmission. According to his way of thinking, it might be supposed that the Indo-Celtic race carried with it in its migration to the westward the first model of an instrument played by rubbing the strings, the supreme consummation of which in the hands of a virtuoso now fills us with delight. He gives support for this assertion in a later sentence, where he says that the palpable kinship between Sanskrit and the Celtic dialects is a positive proof of the relations which must formerly have existed between the two nations, though they are now so far apart.

Fétis repeats in his "Histoire Générale" (1869-76) the assertion that "India saw the birth of bowed instruments; the knowledge of them spread thence to other Asiatic countries, and afterwards to Europe."[14]

Fétis incurred a reproof from Engel (1879) for his change of view: "There is nothing reprehensible in a searcher after truth exchanging one theory for another; but opinions which are merely conjectural should be expressed with diffidence: bold assertions which cannot be proved as being indisputable are not likely to satisfy earnest students."[15] But Engel's own remark is not lacking in boldness, in view of the fact that he himself went the same way in seeking the origin of bowed instruments,

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[14] "Histoire Générale," II, page 291.

[15] Engel, "The Literature of National Music," page 70 f.

and was obviously influenced by Fétis, at least to some extent. He thought (1875) that the plucking technique was the oldest in Europe, and that the bow technique "when it came into use" was applied to different instruments. He referred to the Hindu *suroda* (a name which I have not found in Professor Sachs's "Reallexikon"), or *saroda* (see Engel, pp. 91-2), which was used sometimes as a lute and sometimes as a fiddle. He thought of the Irish cruit as "played by twanging the strings and also by the application of a bow"; he believed that the three-stringed predecessor of the crwth was "the Moorish fiddle, which is still the favourite instrument of the itinerant bards of the Bretons in France, who call it *rébek*."[16]

Fundamentally, therefore, these two investigators adopted the same theory as to the Oriental origin of bowed instruments, and this theory has left a lasting mark on the history of musical research.

Shortly afterwards certain attempts to criticise the theory were made, if only tentatively. Rühlmann demonstrated the obscurity existing in regard to the *ravanastron*, which he declared to be neither ancient nor primitive in construction.[17] He had observed, moreover, that Fétis's description of the *ravanastron* exactly fitted the Javan *rebab*, which had been illustrated by Zamminer and also exhibited by a traveller, G. Spiess, in Dresden, in 1863.[18] Fétis had not shown in "Stradivari" any illustrations of the instruments on which he based his "Indian theory."

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[16] Engel, "Musical Instruments," pages 91-2, 93-4; ed. 1908, pages 88-9.

[17] Rühlmann, op. cit., page 12.

[18] Rühlmann, op. cit., page 13.

Rühlmann regretted this omission, which rendered any comprehensive criticism of the theory impossible.[19] He also put forward a view of his own on the actual question of origin. He considered that bowed instruments had

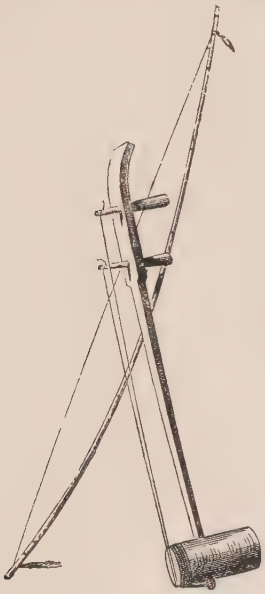

Fig. 1. Indian ravanastron. From Fétis, "Histoire Générale," II, p. 293.

Fig. 2. Ravanahasta player. From Sachs, "Die Musikinstrumente Indiens und Indonesiens."

arisen independently at different times and in different places amongst advanced civilised peoples, but that they had always sprung from a primitive, rude form.[20]

These criticisms, however, like the view just quoted that

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[19] Rühlmann, op. cit., page 18. He had thus overlooked the fact that Fétis discussed the question again in the "Histoire Générale," where illustrations were also given.

[20] Rühlmann, op. cit., page 6.

bowed instruments arose independently in different quarters, had too little foundation to influence the discussion very much. The traditional view held its ground. As late as 1903, Professor Buhle wrote about bowed instruments: "They presumably come from the east, and the Spanish Arabs may well have brought us the knowledge of them, as we find them principally in Spain and France."[1] But when, three years later, he spoke on the study of musical instruments at the International Musical Congress at Basel, he adopted another attitude, remarkably enough, which approached pretty closely to Rühlmann's view. He there said: "There are no grounds for placing them in exotic countries. Europe may be their home, may, as well as India, have developed them independently, only we cannot yet prove it."[2] Naturally this pronouncement gained all the more importance, as it signified a departure from a view previously expressed, but for lack of evidence it still remained only an assumption.

For the rest, on this occasion, Professor Buhle only touched on the history of musical instruments in passing. He dealt mainly with M. Grillet's monograph, "Les Ancêtres du Violon et du Violoncello," which he considered had failed to elucidate the early history of bowed instruments. He insisted on the importance of striving to collect as much evidence as possible from illustrations, and quoted as the oldest representation of a bowed instrument known to himself, that in the Hennegau Psalter of about A.D. 980, which is only a few years later than the Byzantine

[1] Buhle, "Die musikalischen Instrumente in den Miniaturen des frühen Mittelalters," page 4.

[2] Bericht über den II Kongress der I.M.G., page 222.

ivory casket in the Museo Nationale in Florence,[3] whereon there is also shown an instrument played with a bow. Professor Hammerich discussed the history of bowed instruments at the same congress in a lecture, "Zur Frage nach dem Ursprung der Streichinstrumente." He gave this lecture expressly to examine Fétis's "Indian theory," against which he adopted an attitude of no small opposition. His criticism was first directed to the conclusions which Fétis had drawn from three words in Sanskrit supposed to mean "bow." Professor Hammerich had appealed to Dr. Dines Anderson, professor of Sanskrit at the University of Copenhagen, and obtained from him a statement that none of the words in question could be translated "bow," so that they lacked the evidential value assigned to them by Fétis.[4] This criticism, however, is not directed against Fétis himself so much as against his Sanskrit expert, Professor M. Foucaux,[5] and as the question is thus one of an unsettled controversy between two experts on a point of interpretation, Professor Hammerich's argument is not conclusive either. More convincing is his opposition to another of the corner-stones of Fétis's theory, viz., that a bowed instrument is mentioned by the Arab writer, Alfarabi (died A.D. 950), which may be taken as evidence that such instruments were known in the East at an earlier date than in Europe—even though the difference in date between that writer and

[3] A. Venturi, "Gallerie Naz. Ital." Rome, 1897, dates the casket ninth century. See also the bow, sixth or seventh century, in the monastery of Bâwit. "Enc. Brit.," s.v. "Bow," Vol. IV, page 339, notes 7 and 8. (Editor.)

[4] Bericht über den II Kongress der I.M.G., page 226 ff.

[5] Fétis, "Histoire Générale," II, page 292.

the Hennegau Psalter is but small. Professor Hammerich shows convincingly that Fétis has made a mistake here. "Alfarabi describes an instrument called the *rabab*, which is now generally known as a bowed instrument, but he does not say anywhere that it was played with a bow."[6]

Although criticising Fétis's theory, Professor Hammerich finally gives it a good deal of support. He fixes on a passage in one of the writings of the Arab geographer, Ibn al Fahih al Hamadhani, from about A.D. 903: "The Copts are more proficient than the peoples in Sind (on the lower Indus) with regard to the *kemankijah* and playing." The name *kemankijah* is an Arabic form of the Persian word *kemancheh*, and is not only used in the Persian form as the name of a Perso-Arabian bowed instrument, but actually denotes such an instrument, for *keman* means bow. Professor Hammerich considers, therefore, that its occurrence in this passage leaves no doubt as to the nature of the instrument meant by the Arabian geographer. Under these circumstances, his discovery—or rather Dr. Arthur Christensen's, as Professor Hammerich himself points out—forms definite evidence to put in the place of that just destroyed. In spite of all, he considers that the "Indian theory" has gained in probability.

In point of fact, the production of this passage from the Arab writer forms a confutation of Kiesewetter's argument, which was based on the absence of early Arabian literary evidence. (But this Professor Hammerich does not mention.) Whether this single piece of evidence is to be considered decisive, even if it proves unshakeable on

[6] Hammerich, op. cit., page 228 f.

renewed scrutiny, is another question. In any case it is odd to see that Professor Hammerich met with just the same fate as overtook Engel. They both adopted an attitude of opposition to Fétis, only to become subsequently his supporters.

Professor Hammerich thought that one important point in favour of India's priority was to be found in the peculiar characteristics of the primitive Indian instrument, *ravanahasra* or *ravanastron*. He, like Fétis, regarded this instrument as an absolutely original type, constructed from the outset to be played with a bow. But as such it was also, in his view, a thing apart. The origin of all other bowed instruments was to be sought in plucking instruments, or in other words, "bowed instruments have developed from plucking instruments."[7] This radical view was not a novelty, even though it had not previously been expressed in so categorical a form. It certainly is not to be found in Fétis's "Stradivari," but the English scholars adopt it eagerly, because they have been unable to explain the crwth otherwise than as a "transitional instrument" between the plucking and the bow technique. The theory seems to have been put forward by Engel, in a modified form. He says of both the *rotta* and the crwth that they were played by "twanging the strings and also by the application of the bow," and adds "the first method was, of course, the older one."[8]

Professor Curt Sachs has done most to forward research into the origin of bowed instruments. In the course of his historical studies he has repeatedly touched on problems

[7] Hammerich, op. cit., page 227.

[8] Engel, "Musical Instruments," pages 91, 93.

of this nature, weighed current theories, examined fresh material, and opened up new lines of research. He assigns a higher value to the northern material than do his contemporaries, and if he has been led to form certain conclusions which are still open to discussion, this is only owing to certain easily explained gaps in his knowledge of that material. It is only fair to say that he speaks with great caution, and sometimes traces intuitively the evidence that he lacks.

In his work on the musical instruments of India, Professor Sachs seems to agree with the most important point in Fétis's "Indian theory," namely, that it was in Nearer India that stringed instruments were first played with a bow. He notes, however, that the word *ravanastron* does not occur in India at all. On the other hand, the word *ravanahasta*—"Ravana's hand"—does occur in Sanskrit as the name of an instrument, and then denotes a bowed lute with six strings which is elsewhere also called *sarangi*. Whether the "reed lute"—for, according to Professor Sachs, that is what Fétis's *ravanastron* is—must be considered the oldest bowed instrument, he does not say. He knows of no certain evidence in literature or reproductions, and "so long as unimpeachable localised objects are not forthcoming, it is scarcely possible to draw further conclusions."[9] In another passage of the same work, however, he is less cautious. Speaking of the origin of the bow, he says: "To the question of its home Fétis has already given the answer: India, and the pro-

[9] Sachs, "Die Musikinstrumente Indiens und Indonesiens," page 111 f.

blem will be solved in the same sense to-day, after a temporary sinking of the scale in favour of the northern Teutonic countries. We can also give the answer: India."[10] But, remarkably enough, he has not remained faithful to this view. He returns to the question in his last work, "Handbuch der Musikinstrumentenkunde": "Whence comes the bow, from the Orient, from the North?", but he does not himself give any direct conclusive reply.[11] He had already in another work put forward a consideration which is of great, not to say decisive, importance. In an excellent treatise on the question of the bow, he calls it a serious fault in method to try to divide the history of musical instruments into two periods, a lower *without* and a higher *with* the bow. "The drawing of a line between the plucking technique and the bow technique," he says, "is not a chronological but an ethnological question."[12] He repeats this sentence in the "Handbuch," where he points out that one sees everywhere at this day the most primitive instruments being played with the bow, and more developed, later types being plucked. He adds that the classical peoples of Europe possessed plucking instruments when they first appear in history, while, on the other hand, the northern and Oriental peoples have bowed instruments, which are more in keeping with their temperaments.[13]

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[10] Sachs, op. cit., page 107.

[11] Sachs, "Handbuch der Musikinstrumentenkunde," page 126.

[12] Sachs, "Die Streichenbogenfrage," Archiv. f. Musikwissenschaft I, page 3.

[13] Sachs, "Handbuch," page 126 f.

The question of the age of the Welsh crwth as a bowed instrument one would expect to find answered in the English literature on the subject. As we have seen, however, it was Fétis who devoted the most careful research to this instrument in the last century. Later English enquirers seem to have followed him and Engel, even where the information from Celtic sources about the ancient Irish cruit might have given ground for serious objections. Dr. Grattan Flood says in one place that the older crwth, similar to the Irish cruit, had, by the fourteenth century, been transformed into the modern crwth.[14] In another passage he says of the cruit, almost in Engel's words, that it was originally a harp or lyre plucked with the fingers, but later played with a bow.[15] Subsequently, however, the same writer believed that there was a probability of the Irish having had a knowledge of the bow as early as the sixth century, although it was then connected with the ancient Irish *fidil*, which instrument he also calls the "bowed cruit."[16]

The two most eminent English historians of musical instruments who have dealt with the question of the Welsh crwth and its early history are the Rev. Francis W. Galpin and Miss Kathleen Schlesinger. Both these writers published their comprehensive and very valuable works in 1910, the former "Old English Instruments of Music," thus restricting his subject geographically, and

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[14] Grattan Flood, "The Story of the Harp," page 37.

[15] Grattan Flood, "A History of Irish Music," page 22 f..

[16] Grattan Flood, in the "Journal of the Royal Society of Antiquaries of Ireland," 1908, page 381.

the latter "The Precursors of the Violin Family."[17] Both have examined a large amount of material and made important contributions to the solution of the problem. Neither of them, however, has succeeded in elucidating satisfactorily the early history of the crwth, which is so nearly connected with the question of the origin of the bow. Mr. Galpin regards it as certain that the bow is not of European origin.[18] Either, therefore, he has overlooked, or he does not agree with Dr. Grattan Flood's statement about the *fidil* quoted above, not to speak of other ancient Irish sources in which there are hints of the presence of bowed instruments. As for the lyre-like instrument used by the former inhabitants of the British Isles and called by them *crot* or *cruit*, he thinks that they most probably brought it with them from their earlier home on the Sumerian plateau in western Asia. There, he says, in the cradle of the Aryan race, the lyre demonstrably existed three thousand years before the beginning of our era. Thence the Greeks and Romans received it. "The Homeric *kitharis* and the Celtic crot have a common parentage." Mr. Galpin does not believe that the presence of this instrument in Ireland was due to the influx of the Milesians, who came from northern Spain accompanied by a cruitire or crot-player, because

[17] First published serially in "London Musical Courier," 1897-8. See also the later researches of this writer (Kathleen Schlesinger) consisting of many articles in the "Encycl. Brit.," Edition 1911, S. V. Cithara, Rotta, Crowd, Bow, Guitar, Guitar-fiddle, etc.—[Ed.].

[18] Galpin, "Old English Instruments of Music," page 73. But see op. cit., page 68, where Galpin points out that O'Curry admits that his suggestion of a bow for the *timpan* was founded upon *a passage which is very late and obscure.* (Editor.)

the Irish annals, if correct, show that such instruments existed in Ireland before the coming of these immigrants.[19] But he seems to be inclined to draw a definite distinction between the ancient Irish crot or cruit and the modern Welsh crwth. He connects the former with the precursor of the triangular harp. The latter he traces back to a crowd "closely connected with the story of the cruit." He also speaks of "the adaptation of the Oriental fiddle-bow to the Celtic cruit or crwth."[20]

Miss Kathleen Schlesinger asserts that the crwth is descended from the chelys or testudo lyre,[1] thus adopting somewhat the same view as that expressed by Fétis when he connected the instrument of the ancient Celtic bards with representations of lyres on Gallic coins of the time of Cæsar, and assumed that the instrument had been introduced into Gaul by the Greek colony in Marseilles six hundred years before Christ.[2] Concerning the development of the crwth on British soil Miss Schlesinger expresses herself resolutely, indeed, in a rather polemical tone. To quote her book: "By a curious process of reasoning, certain writers on music and musical instruments persist in claiming for Wales or Brittany the honour of the invention of the bow. . . . . Nothing is known of the use of a bow with the crwth before the eleventh century, but it is nevertheless *assumed* without the slightest authority by these writers that the crwth had always been played with a bow, whereas the very construction of the

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[19] Galpin, op. cit. pages 1-3.

[20] Galpin, op. cit. pages 73, 79.

[1] Schlesinger, "The Precursors of the Violin Family," page 494 ff.

[2] Fétis, "Histoire Générale," IV, page 341 f.

instrument, to which every facility for using the bow has been denied (such as incurvations, arched bridge), militates against this hypothesis. . . . . The Welsh crwth, in fact, until the time when the bow was applied to it, probably during the eleventh century, was a rotta, and was known in England by that name during the eighth century, and in Ireland as a crot or cruit."[3]

Thus English research into the history of musical instruments has augmented the material for comparison, especially Miss Schlesinger's book, which leaves nothing to be desired in the way of comprehensiveness. But in so far as the crwth is concerned, the result is a repetition of the old theory that it is a transitional form between the plucking and the bow technique. This view is also adopted by Mr. MacDowell, the only American investigator, so far as I know, who has occupied himself with the problem.[4]

The Danish writer, Miss Hortense Panum, has expended much labour on the study of the mediæval stringed instruments, and dwells with special predilection on the types found in the British Isles. She has published her results in articles and treatises which appeared in 1903,[5] 1904[6] and 1905,[7] and finally in her great work,

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[3] Schlesinger, "The Precursors of the Violin Family," page 494 ff.

[4] "Critical and Historical Essays," page 136.

[5] "Nordeuropas gamle Strengeinstrumenter." Foreningen til norske fortidsmindesmaerkers bevaring, Aarsberetning, 1903, page 107.

[6] "Harfe und Lyra im alten Nordeuropa," Sammelbände der I. M. G., VII, 1, page 1.

[7] "De folkelige Strengeinstrumenter i Nordens Middelalder," Aarsberetning, 1905, page 112.

"Middelalderens Strengeinstrumenter og deres Forlobere i Oldtiden," the first part of which, "Strengeinstrumenter uden Gribebraet," dealing with stringed instruments which have no finger-board, was published in 1915 through a grant from the Carlsberg fund.

The Welsh crwth, as a bowed instrument, properly belongs to the second part of the work, which has only just been published as this is going to press, but it has received an important place in the description of the Irish cruit, which the writer supposes to have been a stringed instrument "of which the strings were plucked,"[8] and a precursor of the modern crwth. It seems right to quote her remarks on the crwth rather fully: "This bowed instrument is also said to have been known earlier in Ireland, and the Welsh assert that it is very ancient. It has features, however, which show that it was not originally intended to be played with a violin bow. The flatness of the bridge which raises the strings from the belly makes it almost impossible for the bow to stroke the strings of this instrument one by one, and this is made still more difficult by the fact that the sides of the resonating body are straight, i.e., they lack the incurvations which are necessary for the use of the bow. When carefully examined, however, the instrument has a striking resemblance in shape to the round lyre. Like the latter, it has two arms which are joined together at the upper end by a yoke. Now it is really only the finger-board which in this crwth divides the open space between the lyre arms into two, and the finger-board can very well

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[8] "Middelalderens Strengeinstrumenter," pages 108-9.

be an addition of later date. When about A.D. 1000 the violin bow was introduced into Europe from the east, it was for a time applied experimentally to nearly all the existing stringed instruments, and experience then gradually made a selection of those best suited to its needs. In this way the Welsh crwth may at some time have been given a finger-board, the presence of which on an instrument of the lyre type would otherwise be difficult to explain.[9]

Miss Schlesinger's recently quoted argument, appealing to the features which "indicate" that the instrument was not originally played with a bow, is given with great force in Miss Panum's pronouncement. It is a sign of the difficulty of the problem that the passage quoted is reproduced almost verbatim from her first article on the subject,[10] although the progress made by research since that was published is surely deserving of notice. We shall see further on that Miss Panum strains the "transition" theory to breaking point. But the example of her famous predecessors and the difficulty of handling the material can both be urged in her defence.

Reference was made above to Prof. Buhle's remarks about M. Grillet's work on the forerunners of the violin family.[11] French research into the history of musical in-

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[9] "Panum," op. cit. page 108.

[10] The principal change is that the crwth is now classed with the round lyre, whereas in her article of 1903 the writer pointed to the similarity between it and the "ancient lyre." [Priority of statement nevertheless belongs to Kathleen Schlesinger in 1897.—Editor.]

[11] The present writer has unfortunately not had an opportunity of consulting Grillet's work.

struments does not seem to have done much in the last twenty years to bring the problem nearer a solution, to judge from the fact that M. René Brancour, keeper of the museum at the Paris Conservatoire, seems in the history of musical instruments, which he published some few years ago, to adopt practically Fétis's standpoint. He begins his description of bowed instruments with a reference to the Indian ravanastron and the Arab rebab, and says: "It is, however, probably the east to which the west is indebted for the bow." Yet he regards *le crouth* as a peculiar type which has existed in the Gallic countries since the second century of our era, and even calls this instrument "the venerable ancestor of the violin family," an expression which seems in a sense to conflict with the "possibility" referred to above that the west is indebted to the east for the bow. He further points out the difference between the crouth and the rebab, namely, that the former has ribs, which the latter lacks; and he gives an account of the evolution of the crouth from a three-stringed to a six-stringed instrument, in which latter form it still survived in the Gallic countries as late as the end of the eighteenth century. In France, however, he considers that the rebab gave rise to the *rubebe* or *gigue*, which was afterwards followed by the three-stringed rebec.[12] Thus M. Brancour's attitude to these questions is apparently rather indefinite. In any case he makes no attempt to disentangle conclusively the mutual relationships of the instruments named. The summary way in which he has dealt with the obscure questions is a merit of the work.

With regard to the bow itself, the position of German

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[12] Brancour, "Histoire des Instruments de Musique," page 5 ff.

research has already been noted in the quotations from Prof. Sachs. Mr. Georg Kinsky might also have been quoted. He was so much interested in this group of instruments that he had a three-stringed crwth made for the Heyer Museum at Cologne, from the well known eleventh century representation in the monastery of St. Martial de Limoges. In speaking of the ancient lyre with plucked strings as the ancestor of modern bowed instruments, he only says that no definite solution of this question has yet been effected.[13]

Mr. Markus Koch also emphasises the obscurity of the question of the bow. As the classical stringed instruments were plucked, and as the use of the bow is not known from Greece, the only course remaining, he says, is to trace back bowed instruments either to the Indian ravanastron or to the one-stringed rebec. For the rest, this author seems to accept the traditional view of the crwth's "transition" from the plucking to the bow technique, with the rebec as the connecting link.[14] Mrs. Ruth-Sommer also finds the Indian theory the most probable of the different hypotheses.[15] Mr. Schlosser, again, considers that the crwth shows such astonishing resemblance to the Greek lyre that the hypothesis of its having been directly influenced thereby does not seem to be impossible.[16] This writer seems to have arrived at the same conclusion as Miss Schlesinger—whether actually swayed by her or not—namely, that the crwth was derived from the

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[13] Kinsky, "Katalog," II, page 363.

[14] Koch, "Abriss der Instrumentenkunde," page 8.

[15] Ruth-Sommer, "Alte Musikinstrumente," page 42.

[16] Schlosser, "Unsere Musikinstrumente," page 16.

ancient stringed instruments, either directly or through a number of intermediary forms. Prof. Sachs, on the other hand, is of the same view as Mr. Galpin, that although the likeness between the kithara and the crwth is obvious, the relationship of the latter to the former is not one of "dependence" but of "cousinship." He refers to a recently discovered Chaldean relief five thousand years old—probably the evidence mentioned by Dr. Grattan Flood - which is said to show that both the kithara and the crwth are of Asiatic origin.[17]

This is the view which Prof. Sachs expresses in his "Reallexikon," but he seems to have somewhat modified it later. This may be inferred from the fact that in the "Handbuch" he leaves the nature of the ancient Celtic instruments an open question, evidently moved to do so by his knowledge of the northern bowed harp. After citing the oldest historical sources he simply says: "So the Celts in any case knew and used the lyre at a very early date, whether with or without the bow." As to the miniatures which appear in the eighth century and the well known Alemannic warrior lyre, he says cautiously: "These types appear to have been plucked."[18]

But the possibility of the crwth having been anciently played with a bow does not necessarily mean for Prof. Sachs that its finger-board was the result of organic development. He seems to picture the instrument's history as divided into three periods; first a bowed period,

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[17] Sachs, "Reallexikon der Musikinstrumente," s.v. Crwth. Schlosser, op. cit. page 16. According to information kindly furnished by Miss Schlesinger, the relief is in the Louvre, Salle Sarzec, Paris.

[18] Sachs, "Handbuch," page 159.

possibly represented by instruments akin to the northern bowed harp, then a second period without the bow, perhaps represented by the instruments shown in the miniatures and on monuments, what are called the round lyres, and a third, bowed, period, embracing the time during which the modern crwth has existed as a bowed instrument. For he says first that the mediæval lyre, which "seems to have been plucked," represents a more mature stage than the bowed harps, and then immediately afterwards: "In the later Middle Ages the bow was again general" and "the crwth, however, has again gone over to the bow."[19] But this time the crwth has adopted the finger-board, taking the fiedel as its model.

This argument is the contribution which Prof. Sachs makes to the question of the relation of the crwth to the violin family, regarding which he adopts a decided attitude. That it was the fiedel from which the crwth took its finger-board is for him an important circumstance. He himself explains why this is so. "Taking the fiedel as its model, that must be emphasised; for some modern historians of bowed instruments have attempted to explain the violin family from the finger-board lyre, by a gradual disappearance of the lyre arms and cross piece."[20]

Prof. Sachs here refers mainly to Ambros and Riemann, both of whom held the crwth to be an original Celtic instrument, which has retained its form in Great Britain and Brittany, but quickly been transformed on the continent. The attitude which they adopted has been formulated by Riemann thus: "The oldest kind of

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[19] "Handbuch," page 159 f.

[20] "Handbuch," page 160.

chrotta had only three strings and no bourdon. The instrument was thus a vielle as soon as the arms and cross piece disappeared and were replaced by a solid continuation in the middle (under the finger-board)."[1]

Even in the "Reallexikon" Prof. Sachs called this theory very far fetched. He thought the many modifications which this instrument has undergone to be the result of its character as a "transitional instrument." The "new technique," i.e., the bow technique, demanded a finger-board, incurved sides, etc. He had found no evidence for the dropping of the arms and cross piece, nor did he think it intrinsically probable.[2]

Mr. Schlosser supports this view. Riemann's theory is too far fetched for him also, "almost a textbook example of the superimposing of a logical deduction over a historical, genetic one."[3] But though Mr. Schlosser words his agreement more forcibly than before, he does not adduce any fresh evidence.

When Prof. Sachs asserts that the crwth received its finger-board from the fiedel, it is to be noted that in his historical researches he managed to get a better grip of the latter than of the former instrument. The fiedel is less mysterious than the crwth, and may more easily be fitted into the scheme of development. In point of fact he gives a valuable and interesting account of that instrument, which seems at the same time to explain why he accords it the prior claim to the finger-board.

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[1] "Musiklexikon," s.v. Chrotta. Cf. Ambros, "Geschichte der Musik," II, page 234 f.

[2] "Reallexikon," s.v. Fiedel.

[3] "Alte Musikinstrumente," page 26. "Unsere Musikinstrumente," page 16.

Prof. Sachs thinks that the word *fiedel* came into the romantic languages from the Teutonic. Grimm supposed it to be of romance origin.[4] But according to Prof. Sachs it can be traced back to Asia. He quotes the Samoyede name for the drum, *fedilo*, which again he declares to be connected with the Caucasic name for the stringed class of instruments, fendir (= pandur = tanbur).[5] The present

Fig. 3. Turkestan instrument in the Dashkov Museum, Moscow. From Masloff, "Opisanie," Moscow, 1909.

Fig. 4. Fiedel and harp in the Utrecht Psalter. From a photograph in Schlesinger, "The Precursors of the Violin Family."

writer finds it more difficult to express an opinion on this etymology than on the illustrations referred to by Prof. Sachs, who believes himself to have found in the Utrecht Psalter (about A.D. 820) the earliest European representation of a fiedel. He interprets this drawing as a bowed lute "in spite of Schlesinger," and connects the instrument with a Turkestan violin, "geige," in the Dashkov

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[4] Grimm, "Deutsches Wörterbuch," s.v. Geige.

[5] "Handbuch," page 174.

Museum in Moscow, which he declares to possess "the same conclusive features; short neck, nether string-holder, round hole in the middle, spade-shaped body with a point below and angular shoulders above, a large bow, bridge, body and neck of one piece and about half a metre long."[6] The positiveness with which Prof. Sachs speaks of this evidence is surprising. Even if one agrees that the drawing in the Utrecht Psalter represents a bowed instrument, it cannot be denied that there is much more probability for Miss Schlesinger's interpretation of the object in the musician's right hand as "a long sword."[7] And as for the relationship between the instrument in the Utrecht Psalter and the Turkestan violin, the present writer is by no means convinced that all the details enumerated are the same in both, still less that the European instrument also possesses other features of the Asiatic one; "a round peg-box with pegs at the rear (two), horsehair strings, and small depth of body (four cm.)."[8] Prof. Sachs speaks of "a high degree of probability," but the probability would on the contrary seem to be very slight, and not such as to enable one to assume the near kinship between the two instruments which that writer believes to exist.

Prof. Sachs has also a view of his own with regard to the *giga*. Rühlmann made a definite distinction between instruments which lack ribs and those which have them. The former—consisting of back and belly—are character-

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[6] "Handbuch," page 170.

[7] "The Precursors of the Violin Family," page 347, and Plate VI (1), page 374.

[8] Sachs, "Handbuch," page 170.

ised by a definite "bi-partition," which is a sign of extra-European origin, and among these he enumerates the *gigue*, *rubebe* and *rebec* in France, the *giga*, *ribeca* and *lira* in Italy, the *geige* and *lira* in Germany. The latter, again, characterised by "tri-partition"—back, ribs and belly, which are western features—include the *radleier*, *crwth* and *fiedel*.[9] Prof. Sachs, however, regards the giga as practically the same instrument as the fiedel. He says that there is no essential difference between the rebec and the rubebe, nor between these and the gigue, and he rejects M. Grillet's attempt to make the gigue into a smaller, narrower rebec. Even if the giga were developed from the three-stringed rebec with pear-shaped resonating body, this fact has no significance for him, seeing that he assumed two types of rebec, a Moorish and a non-Moorish, only the former of which was related to the Arab rebab. He believes the non-Moorish rebec to be a descendant of the Greek lyre as it was conceived in the Middle Ages (the St. Blasius lyre shown by Gerbert); an instrument originally distinct from the kithara, with a tapering neck forming a continuation of a pear shaped body, and only one string. Thus according to this theory the giga would also have been imported from the east by much the same route as the fiedel, and would coincide with it in most respects. These conclusions are based mainly upon conformity of type between the various representatives, and known ethnographical material from different quarters. Prof. Sachs further adduces in support thereof the lively

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[9] Rühlmann, "Die Geschichte der Bogeninstrumente," page 36 ff.

intercourse between Byzantium and the west of Europe which was already established towards the end of the first millenium after Christ.[10]

The *bowed harp* has so far only been mentioned in passing to illustrate the discussion as to the origin of bowed instruments. Prof. Sachs is the only writer who has noticed the present author's Vienna lecture, in reference to which he says that the "bowed lyres" in the Helsingfors National Museum form the starting point of the whole evolution of the lyre in the north. (He calls them bowed lyres and only mentions four examples). But he adds: "How these northern bowed lyres are to be fitted in among other instruments we cannot yet say. Towards the east there is the *nares-jux*, the plucked lyre of the Ostyaks in north western Siberia, which is the only lyre of modern Asia; but in spite of much that it has in common with the northern type, no positive kinship can be ascertained. Towards the west come the late mediæval plucked lyres of the Norwegians, of which there is one moderately well preserved example in the National Museum in Oslo, while it is shown in a number of not very clear representations in woodcuts."[11]

These words demonstrate the significance of the bowed harp, and at the same time define the principal objects of the present work; namely, to elucidate the character of this instrument, its history and its relationship to other instruments. The bowed harp has held a place among the instruments of the northern peoples since the early

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[10] Sachs, "Handbuch," page 169.
[11] "Handbuch," page 158 f.

Middle Ages at least, it has been associated with their poetry and ideas of music, and has maintained its primitive form until the present day. It re-echoes the northern artistic conception, and bears witness to an honourable truth to tradition. It also contributes to the comparative study of musical instruments new and abundant material, consisting mainly of actual specimens which have been preserved and represent various typologically distinct phases of development. Above all: the bowed harp has been from its origin a bowed instrument the strings of which are stopped without the use of a finger-board, and as such throws new light on the difficult problem of the origin of bowed instruments.

Chapter II.

THE BOWED HARP.

Classification and Typology.

THE bowed harp is a stringed instrument which has a long resonating body either hollowed out of a single piece of wood or made like a box of thin boards. Its back may be either rounded (trough-shaped) or flat. The soundboard is let in at the upper and lower ends, and occasionally also at the sides, or else simply placed in front of the resonating body,[1] and fixed with wooden pegs, strips of birch bark or nails. The strings are from two to four in number, and are stretched between a primitive string holder and wooden pegs which are inserted from the back—posterior pegs. The front stretches some

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[1] In order to clarify descriptions, which have hitherto been exceedingly vague, Prof. Sachs has adopted the following terminology; the *upper* end is that in which the pegs are set, the other is the *lower* end; the *front* is the side where the strings are (the belly), the *back* is the reverse; the *right* side is that which in the case of a violoncello is on the right of the player, the *left* is the other side. "Handbuch," page 155 f.

N.B.—The author uses throughout the book the phrase *right hand-hole* for the hole of the bowed-harp used by the left hand of the player. (Editor.)

way above the cavity and soundboard, and allows room for one or two narrow hand-holes which are cut in it (if there are two they are divided by a centrepiece of wood), or else one wide hand-hole, which is either cut in the wood or formed by arms extending from the sides of the instrument and connected by a cross piece, the yoke or peg piece.

The player holds the instrument resting against his left knee, supporting its lower end against the inner side of his right knee; he holds the upper end by passing his fingers through the hand-hole from the back, so that the right arm of the instrument or finger-piece, rests on the palm of his left hand. He stops the strings, which are quite free and stretched across the hand-hole, by bringing the upper surface of his fingers or his nails into contact with them. In his right hand he holds the bow, which was originally a curved and later a straight wooden stick, strung with horsehair, and keeps the hair taut with his fingers.

The construction of the bowed harp thus exhibits pronounced individuality. Rühlmann, as we saw, had laid down that "bi-partition" and "tri-partition" were two totally incompatible principles of construction, which while they marked the distinction between the east and the west, at the same time comprised all varieties of bowed instruments.[2] But these two principles are united in the bowed harp. It may consist of two parts: the hollowed back and the soundboard; the back may be either rounded or flat; if it is flat the sides partake of the nature of ribs. But the instrument may also consist of

[2] Rühlmann, op. cit. page 38.

three parts: sides, back and soundboard, and then the sides naturally assume the character of ribs in a still higher degree. So Rühlmann obviously went too far. "Bi-partition" and "tri-partition" cannot be regarded as two incompatible principles. The bowed harp shows that the distinction between them is clearly one of time. The rounded or trough-shaped back belongs to a stage of development which is earlier than the time when ribs appear.

The original character of the bowed-harp is most clearly seen when one tries to fit it into the current systems of classification of musical instruments. But it is not only the independent position of the instrument in question and its historic importance which then come to light; the defects of the systems in regard to the classification of stringed instruments also stand revealed.

Professor Victor Mahillon may be said to have laid the foundations of the systematic classification of musical instruments. When publishing in 1888 the comprehensive catalogue of the Brussels Conservatoire, he divided the instruments into four main classes; sonorous instruments, membrane instruments, stringed instruments and wind instruments. This system was based on technical acoustic principles, and primarily on the nature of the vibrating (sounding) body. It marked a great advance on Rühlmann's classification into stringed, wind and percussion instruments (1882),[3] a system which had been proposed by Seb. Virdung in "Musica getuscht" as early as the year 1511.[4] Professor Mahillon's classifica-

[3] Rühlmann, op. cit. page 3.

[4] And earlier still by Cassiodorus. (Editor.)

tion has since been adopted in compiling the catalogues of most large collections, and also in many historical investigations.

Within the main classes, Professor Mahillon arranged the instruments according to the manner in which they are played. Thus he divided stringed instruments into those which are played with a bow and those which are plucked, a division which had been adopted long before by most writers. But this principle, as indeed, Professor Mahillon's whole system, has failed to satisfy some later students. Miss Hortense Panum, in "Middelalderens Strengeinstrumenter," the work already quoted, has tried to introduce a different classification for stringed instruments. She distinguishes two main classes:[5] the first comprising all those instruments which are played with open strings, and the other those in which each string is used to produce several notes. Whatever view may be taken of this principle of classification in itself, the writer falls into error when she calls these groups respectively "stringed instruments with no finger-board" and "stringed instruments with finger-board." The error becomes obvious when she subdivides the second group into "finger-board instruments which are struck or plucked (with the fingers or a plectrum) and finger-board instruments which are stroked (with a bow or wheel)." For the use of one and the same string to produce several notes need not involve a finger-board, the bowed-harp shows that. This instrument, like the Icelandic *fidla* to which we shall be introduced later, finds no place in Miss Panum's system. It would also be diffi-

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[5] Panum, op. cit. page 10.

cult to place therein the Southern Slav *gussla* and a number of the stringed instruments used by uncivilised peoples.

A more successful attempt to develop Professor Mahillon's system has lately (1914) been made by Professor E. M. von Hornbostel and Professor Curt Sachs. Their method of classification marks a decided advance, although, as the authors say themselves, it is scarcely possible even yet to put forward a system which will not require expansion and revision in the future, especially in view of our steadily increasing knowledge of extra-European forms.[6]

Professors von Hornbostel and Sachs adhere to Professor Mahillon's four-class system. They have, however, adopted the name *idiophones* instead of *autophones* for the first class, comprising all "sonorous instruments, because the word "*autophone*" might be interpreted as if those instruments played of themselves, automatically, which is not the meaning. They name the classes: *idiophones*, *membranophones*, *chordophones*, and *aerophones*. They consider it impossible, for excellent reasons, to introduce a uniform system of nomenclature for the different groups into which these classes are divided, and therefore confine themselves to calling the four main groups: classes, sub-classes, orders, and sub-orders. Instead of using the usual signs—figures, large letters, small letters, double letters, etc.—to distinguish the groups and their subdivisions, they have adopted Dewey's system by

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[6] Von Hornbostel and Sachs, "Systematik der Musikinstrumente, Ein Versuch." Zeitschrift für Ethnologie, H. 4 and 5, 1914, page 553 ff.

which figures only are used, and each further subdivision is denoted by an additional figure placed to the right of the others. Thus the classes are denoted by single figures, sub-classes by two figures, orders by three, and sub-orders by four.[7]

It is not necessary here to go deeply into the general question of classification. In order to elucidate the position of the bowed-harp it is enough to glance at the subdivisions of class three, *chordophones*, stringed instruments.

Professors von Hornbostel and Sachs recognise that Professor Mahillon was right on the whole in first dividing the main classes according to the manner of playing, and separating stringed instruments into those played with a bow and those which are plucked. But yet they have some scruples about this method of classification, and remark in support of their view that the manner in which an instrument is played may have changed in the course of time. As an example of such a change they mention the Celtic crwth, which they assert—remarkably enough without any reservation—to have been plucked in former days and only played with a bow since the Middle Ages.

Consistently adhering to the acoustic principle, the writers divide *chordophones* into two sub-classes: *simple chordophones* or zithers, which are denoted by the figures 31, and *composite chordophones*, 32. The descriptions explain that the former consist of a string-holder alone, or a string-holder and a resonating body, which do not

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[7] Von Hornbostel and Sachs, op. cit. page 559. E.g., 321 = the order of the second sub-class of the third class.

form one organic whole, while the latter consist of a string-holder and a resonating body forming an organic whole. The two orders of composite *chordophones* are *lutes* (321) and *harps* (322). The lutes again are divided into *bowstring lutes* (321, 1), *yoke lutes* or lyres (321, 2), and *shafted lutes (Stiellauten)*, (321, 3). The second of these sub-orders is further divided into *bowl lutes* (321, 21), and *box lutes* (321, 22), and among the latter we find the Welsh crwth. The third sub-order is divided into *pike lutes* (321, 31), and *neck lutes* (321, 32), under the latter of which come (321, 322) "box neck-lutes, or neck guitars," the violin, gamba and guitar.

We need not go into the details of this classification,[8] but it appears a bold, almost a violent, step to include under the term "lute" the violin group of instruments, whereof both the structure and the use are totally incompatible with the idea which history gives of what is meant by a lute. And it may be seriously asked whether the manner of playing ought not to be taken into account, at least for the further subdivision of 321, 322. It is true that the writers do not absolutely forbid this, but for theoretic reasons they would not propose it either.

It was shown above that Miss Panum's system of classification leaves no place for the bowed-harp anywhere in the whole scheme, because it is a bowed instrument which has no finger-board. Miss Panum says expressly of her second group that "a finger-board which runs parallel to the strings and lies close under them enables the player to stop each string at any point by the pressure of a

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[8] This debatable classification has not been generally accepted. (Editor.)

finger." This explanation of the significance of the finger-board is apparently based on an idea that strings can only be stopped by being pressed against something firm beneath them. To this several objections may be made. It cannot be said, for instance, that every kind of *harmonic* requires a finger-board. And in the case of the bowed-harp, where there is no question whatever of *harmonics*, it may be said in almost direct contradiction of Miss Panum's assertion, that it is the hand-hole which enables the player to stop the strings. But here the possibilities are restricted. Only in so far as the fingers are able to reach the strings through the hand-hole is stopping conceivable. It should perhaps also be remarked that the outside piece of wood to the right of the hand-hole does, in fact, act as a finger-piece, not in the sense that it enables the player to stop the strings, but that it enables him to hold the instrument. The fact that the hand-hole —instead of the finger-board—is here the essential requisite for stopping the strings, is partly due to the "backhanded" technique, by the use of the finger joints or nails, which is something totally different from pressure against a substratum. It is this ancient technique which gives the bowed-harp its character. Taking it all round, therefore, it would seem that the most important consideration in the classification of the bowed-harp is not its technical construction, but the manner in which it is played. This makes it possible for it to be classed as a bowed, as opposed to a plucked, instrument, but all other grounds of classification lead to difficulties.

Neither is it an easy task to find a place for the bowed-harp in the system of Professors Hornbostel and Sachs. It there falls into the second sub-class of the third class

(32, composite chordophones), and the first order thereof (321, lutes). The difficulties appear in fitting it into any of the sub-orders. To 321, 1, *bowstring* lutes, it does not belong; this sub-order contains only instruments in which each string has its own flexible carrier, the examples being taken from Africa. Neither, as far as the present writer can see, is there any place for the bowed-harp in the second sub-order, 321, 2, as this has hitherto been defined. To this sub-order belong the "yoke lutes" or lyres, in which the strings are borne by a cross-piece uniting two arms which protrude from the sides of the instrument. A study of the descriptions of the two groups into which this sub-order is divided shows only one distinction between them; in the bowl lutes (321, 21) the resonator is bowl-shaped, either naturally or hollowed out, while in the box lutes (321, 22) the resonator is a box constructed of thin boards ("Als Resonator dient ein aus Brettern zusammengefügter Kasten"). The examples given of the former are the "lyra" and the "East African lyre": of the latter the "kithara, crwth." It is here that Professor Sachs seems to include the bowed-harp, although he does not mention it, for in his "Handbuch" he treats it under the word "Leier," calls it "Streichleier," and suggests its connection with the crwth, of which he speaks under the same heading. There would certainly be some justification for placing here the most highly developed bowed-harps, those with a wide hand-hole. But as has been stated above and will be more fully demonstrated in what follows, the bowed-harp, in the case of both early and later forms, may either be hollowed out of a single piece of wood or be made like a box, and the back may be either rounded or flat,

so that the features taken in the scheme of classification as characteristic respectively of 321, 21 and 321, 22 are here combined. When it is further remembered that the hand-hole shows continuous development from a long, narrow hole to a broad square one, the placing of the bowed-harp in this division becomes a problem.

Whether the bowed-harp should be placed in the next sub-order of von Hornbostel and Sachs's system—321, 3, *shafted lutes*, where we found the violin as a subdivision of neck lutes—the present writer will not undertake to decide. Neither is there any need to do so, for the authors are proposing to revise their scheme,[9] and in so doing will certainly take the bowed-harp into consideration. If an opinion were required, one might suggest that the bowed-harp should form a separate sub-order under 321, and be numbered 321, 3. To place it here, however, would involve rearranging the scheme and numbering the *shafted lutes* 321, 4, a denomination which has not up to the present been adopted. It might further be added, that if it should prove possible to accept the principle which makes the structure of the instruments and not the method of playing them, the basis of nomenclature,[10] in accordance with which principles we are here classifying "lutes," both the simpler and the more highly developed forms of bowed-harps might be placed under a heading "whole lutes" with just as much reason as they can be called "yoke lutes"—the bowed-harp is

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[9] Verbal intimation from Prof. Sachs.

[10] It is quite evident that such a principle has not been carried out by Hornbostel and Sachs in classifying stringed instruments as "lutes." (Editor.)

actually a hole instrument, as opposed to the violin, which is a neck instrument. There are, however, some objections to the principle in question, and no particular reasons for adopting such a nomenclature.

With reference, again, to the terms "harp" and "lute" as names for the instrument here studied, "harp" is supported by so strong a tradition that one cannot change it, although that name, whatever its original significance, has now become almost exclusively attached to another group of instruments. It is true, also, that the name may cause some trouble in classifying the instrument, but the combination *bowed-harp* ought to eliminate any difficulties, it indicates, moreover, exactly that difference from the plucked harp on which most stress should be laid. The peculiarity of its construction, the hand-hole, also receives notice in the list of attributes by which the various types are distinguished.

It was mentioned above that the northern material represents various stages of development which are typologically distinct. Thus the material discussed in the present work may be divided into three types:

1. *Narrow-holed bowed-harps.*
2. *Wide-holed bowed-harps.*
3. *Two-holed bowed-harps.*

In an account of the bowed-harp already published,[11] the present writer spoke of types A and B. The addition of a third type is necessitated by material which has since come to hand, whence it appears that the two-holed harp occupies a distinct position, and cannot be regarded

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[11] "Stråkharpan." En Översikt." Hammarstedt-festskrift, page 15.

as a chance variation. The classification of these instruments together in a sub-order of their own finds justification, moreover, in their striking likeness to early forms of the Welsh crwth. The change from letters to figures is due to an effort towards conformity with the system of von Hornbostel and Sachs, which has been followed as nearly as possible, and been taken as a guide in drawing up the following scheme and numbering the items.

The definite classification of the bowed-harp is still an open question. On the other hand, it is easy to arrange the material. In so doing, one notices how the instrument develops and how the Finnish, Scandinavian and Swedish-Esthonian forms merge into each other, forming a single Finno-Scandinavian group of instruments. In saying this before the occurrence of the instrument in different countries has been discussed, the author wishes to emphasise not only its rich and many-sided history, but still more its position as a probable northern product, an excellent representative of the northern temperament.

TYPOLOGICAL SUMMARY.

(321, 3) 1. **Narrow-holed Bowed-harp.**

One narrow hand-hole on the right side of the instrument.

11 *Two strings.* String-holder in form of a horizontal wooden pin kept in place on the resonating body by thongs or strings which are threaded through the lower end of the instrument. Sides straight.

121 Resonating body less than half the total length. Fig. 13.

111 Length of resonating body less than half the total length of the instrument. Figs. 9, 10.

112 Resonating body more than half the total length. Figs. 11, 12.

120 *Three strings.* String-holder either a wooden pin or a long-shaped piece of wood similar to the tail-piece of a violin.

122 Resonating body more than half the total length.

1221 Straight sides. Figs. 14, 15, 16.

1222 Straight sides, indentation opposite hand-hole. Figs. 17, 18.

1223 Sides slightly curved outwards, indentation opposite hand-hole. Figs. 19, 20, 21.

1224 Sides much curved outwards, no indentation opposite hand-hole. Fig. 52.

1225 Sides much curved inwards, indentation opposite hand-hole. Fig. 22.

2. **Wide-holed Bowed-harp.**

Wide hand-hole, formed by two arms protruding from the side of the instrument and united by the peg-piece.

21 *Three strings.* Arms protruding straight from resonating body and in one piece with it. Peg-piece added and scarcely extending beyond the arms. Round back. Fig. 39.

22 *Four strings.* Resonating body and arms of one piece, crosspiece either in one or added. Flat back. Figs. 35, 41, 42.

221 Arms rather nearer together and in one with the crosspiece. Flat back. Fig. 53.

222 Resonating body box-shaped and composed of thin boards. Arms formed by extension of the sides. Added crosspiece slightly curved, and extending beyond the arms. Figs. 37, 42.

223 Resonating body similar to that of a violin. Arms and crosspiece in one. Figs. 36, 43.

3. **Two-holed Bowed-harp.**

Two hand-holes separated by a centre-piece.

31 Left hand-hole shorter than the other. Upper end cut obliquely. Posterior pegs. Figs. 23, 24, 93.

32 Both holes of same size. Upper end straight. Anterior pegs. Fig. 25.

Chapter III.

THE BOWED-HARP IN FINLAND.

The Jouhikantele.

(A). Research and Literary Notices.

THE bowed-harp (called in Finnish *jouhikantele* = horsehair harp) was well known to the older archæologists of Finland. Old Daniel Juslenius, in his "attempt at a Finnish dictionary"[1] (1741), gives the following words in succession:

Candele, instrumentum musicum, *harpa.*
Candelen jousi, plectrum, *stråka.*

The order of the words can be taken to show that by *candele* Juslenius meant the *jouhikantele.* If by *candelen jousi* he had meant the violin bow, he would also have given the name of that instrument. But the word violin does not occur in his lexicon, probably because in his time that instrument was not yet general among the Finns.

Porthan (eighteenth century) mentions the violin ("tetracordi") last among the musical instruments known

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[1] Juslenius, op. cit. s.v. Candele.

to the Finns, and says that it had only come into use in recent times.[2]

The presumption that Juslenius was thinking of the bowed *kantele*, the bowed-harp, finds further support in the fact that his lexicon also contains

Candelen pihca, resina colophonia, *kåda till stråke.*

The order of the words shows that the rosin must have belonged to the instrument. The plucked kantele has naturally nothing corresponding to this, but the older bowed-harps always carry the rosin required for the bow, generally adhering to the under side of the upper portion, either in the angle against the resonating body or at its extremity.

Porthan gave in "De Poesi Fennica" (1766-78) the first detailed account of the kantele instruments, which he seems to have observed personally. He writes as follows: "Sunt autem triplicis omnino generis *citharæ* Fennis in usu: una quæ reliquis antiquior et usitatior, Kandele vocatur, chordis instructa quinque, hodie orichalcinis, olim setis equinis, *quæ pulsatur digitis;* cujus inventionem ut et artis eandem scienter pulsandi, ipsi Väinämöinen, Runicæ artis auctori, precipuo quondam Fennorum Deo, majores nostros tribuisse, infra docebimus. Aliud citharæ genus, vel barbiton, *Harpu* nostris vocatum, nomine a Svecis mutato, prope duos cubitos est longum et cubitum circiter latum, subtus apertum, tribus chordis orichalcinis ornatum, super quæ plectrum setinis equinis constans ultro citroque ducitur. Tertii generis, Jouhi-

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[2] Porthan, "Opera selecta" III, page 367. "Tetracordi (violon) usus recentissimis temporibus invalescere coepit."

Kandele dicta, huic fere similis, sed duplo minor, chordisque tribus e setis equinis tensa, plectro ad eundem morem tangitur. Hiis iisdem instrumentis ad saltantium quoque motus et numeros moderandos, iis locis ubi incolis hujusmodi placet ludus, saepe utuntur."[3]

This description is remarkable in several ways. In the first place, "cithara" seems a surprising term to apply to all these instruments, but Porthan is following the current usage. The word is used in Latin after the Middle Ages for the most widely different instruments, a fact which has caused much difficulty to students. It is remarkable enough that Porthan even includes the bowed-harp under the term "cithara," but still more so that he, like Juslenius before him, uses the word "plectrum" for the bow. This word often occurs in old literature in connection with different instruments. In modern usage it means a quill, or piece of wood, bone or metal, for sounding the strings, e.g., of a mandolin. It has been held that this was the only meaning the word could bear, even in older literature, and the musical lexicons and books of reference give no other interpretation.[4] This fact has had a great influence on the discussion as to the age of bowed instruments in Europe, for every instrument played with a plectrum has been declared forthwith to have been plucked. Mr. Galpin says, for instance, in regard to attempts which have been made to prove the use of the bow among the Greeks and Romans of the classical period, that "the word plectrum will bear no

[3] Porthan, "Opera Selecta" III, page 366 f.

[4] Riemann, "Musiklexikon." Norlind, "Allmänt musiklexikon." Sachs, "Reallexikon der Musikinstrumente."

such translation."[5] It would seem, however, that the meaning assigned to it by Juslenius and Porthan may call for a revision of this view, especially as several lexicographers translate "plectrum" by "bow."[6] We need not here discuss what bearing this interpretation might have on the question as to the date of the bow in Europe, which naturally depends on a number of other considerations, objects, illustrations, etc.

Porthan expresses a definite opinion as to the relative ages of the different instruments which he mentions, probably on the authority of a tradition from some particular region. He does not, however, produce any conclusive evidence for his view that the plucked kantele was the oldest Finnish instrument. He says in a note that the five-stringed lyre was ancient in the north, and he refers to Pollux's statement that it was invented by the Scythians.[7] This theory is not quite incompatible with the results of modern research.[8] The age of the kantele among the Finns as compared with the jouhikantele will be considered later on.

Porthan says that the second instrument mentioned,

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[5] Galpin, "Old English Instruments of Music," page 79.

[6] Scheller, "Latinskt lexikon," translated by C. Heinrich, Orebro, 1828. "Salenius, Latinsk-svensk ordbok," Stockholm, 1911. Cf. Grimm, "Deutsches Wörterbuch," s.v. Bogen. Fétis ("Stradivari," page 2), mentions that the word *plectrum* has been interpreted to mean *bow*, but rejects such an interpretation. Rühlmann also doubts its correctness "as the Greek word *plektron* means to hit, strike, which it is difficult to apply to the bow." ("Die Geschichte der Bogeninstrumente," page 11, note 3.) Cf. the word *slå*, page 102 f.

[7] Cf. Pollux, "Onomasticon," Lib. IV, 60.

[8] Sachs, "Handbuch," pages 132, 136, etc.

called by the Finns *harppu*, a word borrowed from the Swedes, was nearly two cubits long and about a cubit wide, had three brass strings and was played with a bow. Such an instrument finds no counterpart in the ethnographical material, neither is there any resemblance between it and the "harppu" mentioned in the folk songs. It is impossible to decide for certain, in the present state of research whether Porthan's statement was due to some confusion, or whether such an instrument was actually used by the Finns in the eighteenth century, although it has since been lost.

The most important point for the present study is that Porthan mentions the *jouhikantele*, the description whereof tallies with the instruments which have been preserved to our days. He mentions in a note the belief that the strings should be taken from the tail of a swift, spirited and thoroughbred horse, in order to obtain a pure and agreeable tone, thus giving a hint that the bowed-harp is the kantele of the folk songs and of Väinämöinen,[9] for the same idea is found in some of the principal variants of the lays.

Just as Porthan's study of Finnish folk poetry laid the foundations of modern research in that field, so too a number of succeeding writers made his description of the national musical instruments the basis of their work. Rühs supplemented his account in several particulars, and

[9] Is the inference here that the mere mention of *horse-hair* in connection with these ancient instruments implies the use of the bow? The Welsh used horse-hair to string their harps (Telyn). See above page 49, where Porthan is credited with the view that the plucked kantele was the oldest Finnish instrument. (Editor.)

described the manner of tuning, accompanying the voice, etc., but had nothing of importance to add in regard to the *harppu* and *jouhikantele*.[10]

Gottlund, in reviewing Rühs's work, made a full and somewhat controversial study of the relationship between the plucked kantele and the jouhikantele.[11] He believed, in the first place, in opposition to Porthan whom Rühs had followed, that the jouhikantele was the older of the two instruments, on the ground that it "betrays greater simplicity in its construction, which is always apt to be a sign of greater age," and "in Finland horse-hair strings are always older than steel or brass ones." He combats the statement that Väinämöinen was the inventor of the kantele, which was likewise borrowed from Porthan, and declares that the ancient lays give no support for such an assertion. On the contrary, they say that Väinämöinen "was taught by his father, Kaleva, the art of playing on the strings. All that they claim for Väinämöinen is that he made his harp himself (and every peasant does that still), and could use it with masterly skill." Gottlund goes on to say: "If the harp had been originally invented by Väinämöinen, it ought to have received its name at the same time; but this was not what happened, for when Väinämöinen began to play and all gathered round to hear the sweet music, according to the runes, the first question asked was: 'Whence is the harp (kantele) derived?' So they took it for granted that it was a harp. They even asked whence the pegs, strings, back, etc., were taken. Such things must therefore have been seen before, seeing

[10] Rühs, "Finnland und seine Bewohner," page 17.

[11] "Svensk Litteraturtidning," 1817, No. 22, May 31.

that they already had their separate names, for otherwise the whole would surely have been regarded as one single object."

Gottlund's own personal experience gave strong support to his opinion, for his description of the construction and use of the instrument is based on direct, first hand observation, and is really the most valuable contribution which he makes. He writes: "The author has often marvelled to hear how even Russian quadrilles and other slight pieces are executed on this very imperfect instrument, which has only two wretched horsehair strings, and one of them cannot give any other than its primitive note, for it cannot be reached with the fingers. It is true the other string can be modified to some extent, not by the finger tips but by the upper surface of the fingers, which are inserted through a long shaped hole or handle. Indeed, the author has seen a virtuoso so skilled in his art that the country gentry employed him to play at their Christmas parties."[12] The keen interest which Gottlund took in the bowed-harp is shown by the drawing thereof made by Magnus von Wright. This drawing was probably intended for insertion in a third volume of "Otava," which was never published. Professor Grotenfelt has drawn the present writer's attention to the illustration, which seems to have been drawn in the beginning of the eighteen-thirties, and is thus the earliest known representation of the jouhikantele (see Fig. 5).

[12] "Svensk Litteraturtidning," loc. cit. This observation was in all probability made at Juva. Gottlund was born at Strömfors, but when he was seven years old his father became pastor of Juva, and it was there that he developed the interest in Finnish national life and poetry which so strongly marked his whole career.

Gottlund's criticisms of current views about the kantele and jouhikantele do not seem to have attracted much attention. At least they did not provoke any continued scientific discussion. Von Schröter followed Porthan in enumerating the musical instruments of the Finns,[13] although he ought to have known of Gottlund's article in "Litteraturtidningen," and had certainly discussed the question with Pippingsköld, who was his musical expert,[14]

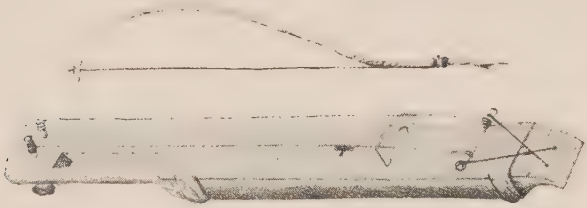

Fig. 5. Finnish bowed-harp. From a drawing by Magnus von Wright.

and possibly also with Gottlund himself. Arwidsson, in his review of von Schröter's work goes no further than to call the harppu and jouhikantele "variations of the kantele," not a very happy paraphrase of Porthan's expression.[15] And when in 1827 Arwidsson published a second revised and enlarged edition of Rühs's work in a Swedish translation, he made no change in or addition to the passage attacked by Gottlund.[16]

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[13] Von Schröter, "Finnische Runen," page vii.

[14] Andersson, "J. J. Pippingsköld," page 78 f.

[15] "Mnemosyne," 1820, page 75. "The native musical instrument is called *kantele*, a kind of harp with five, seven or nine brass strings. The *harppu* with brass strings and the *jouhikantele* with three horsehair strings are variations of the kantele. These are played with a bow."

Porthan says: "Sunt autem triplicis generis citharae." See *ante*, page 46. (Editor.)

[16] "Finland och dess invånare," page 11.

Renvall included under *kantelet* in the "Lexikon linguæ finnicæ" which he published in 1826, not only the plucked kantele but also the jouhikantele and *kanteleen joutsi.* Like Juslenius and Porthan he translates this last word by "plectrum."[17] Lönnrot also included *jouhikantele* and *kanteleen jousi* in his dictionary, translating the former as "a smaller kantele with horsehair strings," and the latter as "a harp bow."[18] It should here be noted that these lexicographers translate the Finnish word *kantele* by the Swedish word *harpa.*

Thus the jouhikantele had attracted no little interest, but nevertheless it still remained overshadowed by the plucked kantele in the place where Porthan had put it. Arwidsson's description of the latter as the "native" instrument and the former as a "variation" held the field.

Interest in the jouhikantele gained in strength towards the middle of the century. Students were then engaged on research into the Finnish language and culture, and several of them made valuable observations which they communicated to that industrious collector, H. A. Reinholm, mostly by word of mouth, but some also in writing. Reinholm put these together, adding opinions of his own, in a "collection of material for describing the music of the Finns."[19] It would seem that he had expressly asked his friends among the younger students to collect and

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[17] *Kantelet,* leen Ns (Nomen substantivum) *cithara Finnorum primitiva,* quinque chordis instructa et digitis tractanda. Harfe der Alt-Finnen, sed *jouhi-kantelet barbiton minus* ternis chordis setaceis ornatum et plectro tangendum. Soitan kanteletta, *citharam pulso,* kanteleen kieli, *chorda,* kanteleen joutsi, *plectrum.*

[18] Lönnrot, "Finskt-Svenskt Lexikon," s.v. Kantele.

[19] Reinholm Collection, No. 32. National Museum.

send to him information of this kind. In a letter dated March 4, 1849, Europaeus describes how he had heard in Ilomants an octogenarian named Pekka Kettunen playing a kind of jouhikantele which he (Europaeus) had neither seen nor heard before. The old man was probably dead, but his harp might still exist. As the Finnish Literary Society possessed no example of such an instrument, Europaeus advised Reinholm to write to Ilomants and get it sent to him, asking at the same time what names were used for the bow and other parts, whether many of these instruments existed, whether they had been commoner at an earlier date, etc.[20] In another letter dated April 11, and probably of the same year, though it is not given, Europaeus expresses his regret that so little is known of the kantele, "which after all is an ancient Finnish instrument," or rather nothing beyond the fact of its existence. He adds: "A civilised people wants something more than the homely kantele which satisfied old Väinämöinen in his day." In another of Reinholm's notes, headed "from Ilomants about the kantele," we read: "Kantele instruments large and small. The former have eight or twelve strings of horsehair (?). The latter have two strings. Those with eight and twelve strings are played lying on the table, but that with two strings is held aslant in the lap. Those with two strings, again, are nowadays of two kinds; the real kantele or jouhikantele, and the harppu."

Berndt Abraham Godenhjelm gave an account, possibly at Reinholm's direct request, of the jouhikantele which he had heard as a child in his native parish, Mäntyharju. It was as long as an ordinary kantele, but had only two

[20] Niemi, D. E. D. "Europaeuksen kirjeitä," page 117 f.

strings, which were of spun horsehair, the one containing more hair than the other. It was played with a bow. In the handle there was a hole big enough for the player to put his fingers through from underneath and touch one of the strings. He did not touch the other. Godenhjelm seems to have been well acquainted with the instrument, to judge from his picture of a jouhikantele player which now hangs in the National Museum. This picture is almost the only representation of the bowed-harp which we possess from the first half of the nineteenth century (probably the eighteen-thirties). It is exceedingly carefully painted, and shows the principal features both of the instrument and of its position when being played (Fig. 6). Small inaccuracies, such as the left hand holding the harp rather too low down, and the incorrect position of the bow in the right hand, are probably due to the artist having painted from memory. The instrument is a typical narrow-holed bowed-harp with hollowed back, the sounding board being fastened by two bands of birch bark and pierced by a cross-shaped sound hole. It can be fitted into the typological scheme as No. 113. It is noteworthy that this harp player is shown in a dress similar to that worn by Väinämöinen in the well known picture, "Väinämöinen's Song," by the same painter.

Abraham Poppius gave Reinholm a description of a jouhikantele from the Sordavala district. He writes in much the same words as Godenhjelm: "The jouhikantele usually has two strings and is now often played with a bow. It is held on the knee, supported by the left hand which holds the neck from below. But the fingers are inserted up through the neck, and the strings and notes are

Fig. 6. *Jouhikantele* player from Mäntyharju (Modern). From a painting by B. A. Godenhjelm, National Museum, Helsingsfors.

modulated by the back of the fingers being pressed against the strings."

Reinholm has also a note that an old man named Kosonen from Nyslott "played old and new tunes on a kantele, holding it as a violoncello between his legs, the narrower end upmost, and stroking it with a bow (kaari); the strings were of horsehair." Finally Reinholm records that the postillion who drove him in Hiitola in 1875, an octogenarian named Antti Tattari, had in his youth made a three-stringed bowed-harp out of a piece of aspen wood.

Reinholm himself declared, in a sketch for an account of the ancient Finnish songs and music, that he did not consider the plucked kantele to be a separate instrument, but only a variation of the old kantele, by which he probably meant the jouhikantele. He thought the change had arisen through a substitution of brass strings for the earlier horsehair ones which gave too weak a sound, while at the same time the instrument was gradually given a handsomer form. This view is probably incorrect, but whatever estimate be placed upon Reinholm's own theories, the material he collected is of immense value. In the first place, it shows how widely known the bowed-harp must at one time have been. Secondly, it gives a number of important hints as to the age of that instrument in relation to the plucked kantele. For instance, Europaeus's statement that Väinämöinen might be satisfied with the homely jouhikantele can presumably bear no other interpretation than that in the opinion of this investigator, who was well acquainted with the subject, the bowed-harp and not the plucked kantele was Väinämöinen's instrument. The same view recurs in the note next quoted, which may also be derived from Europaeus, where the jouhikantele is

called "the real kantele." Poppius's information, as also the note about the old man Kosonen from Nyslott, who "placed the instrument on his knee," used it as a violoncello "between his legs," with the "narrow end upmost," is almost a direct translation of the words of the folk-songs.

The Swedish ethnologist, Gustaf Retzius, who explored Carelia in 1873, made valuable observations about the two kantele instruments. He carried home to Sweden several examples of the different types, which now form part of the collection in the Nordisk Museum. He gave detailed descriptions of them in works which he published later,[1] and the account of his first meeting with a kantele player has even found its way into the history of musical instruments.[2] Retzius described the jouhikantele as follows: "Besides the real kantele there is another kind which is played with a bow. This instrument, from Ilomants, is sixty-five cm. long and fifteen cm. wide, and consists of a box or bowl hollowed out of a single piece of wood, ten cm. deep and with a rounded back. The upper surface of this box is covered with a thin slab of wood, in which a few holes have been made. At one end of the box there is a short projection from its upper surface, and in this there are a couple of holes to which a wooden pin, placed crosswise and otherwise free, is fastened with string. This pin forms the starting point for the three strings, which are of twisted horsehair. The other ends of the three strings are fastened to three pegs, which fit

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1 "Finska kranier," Stockholm, 1878. "Finland i Nordiska museet, Stockholm, 1881.

2 Panum, "Middelalderens Strengeinstrumenter," page 151.

into a longer, flat projection from the other end of the box. In this projection there is a hole about fourteen cm. long, obviously for use as a handle. The bow belonging to this instrument consists of a horsehair string fastened to a wooden stick."[3] As Retzius also gives two drawings of the specimen he took home, his description becomes very clear. It is the more worthy of notice as being the only careful description of a jouhikantele printed during the nineteenth century. It is true that Retzius adopted a different view as to which of the two instruments should be called the "real kantele," but this does not detract from the value of his description.

The most important and comprehensive observations made with respect to the jouhikantele during the second half of the nineteenth century are those of Mr. A. A. Borenius-Lähteenkorva, who travelled about collecting Finnish folk poetry and music. He made his first expedition to East Carelia and Olonets in the summer and autumn of 1871, just after taking his degree in philosophy, and a second journey to the same regions in the following year. On these two first expeditions he paid some attention to the melodies to which the old Finnish folk-songs were sung, and on the third, in the winter of 1876-7 and the summer and autumn of the latter year, the melodies were his prime object, although he naturally continued the collection of folk poetry which he had already begun. This time he also noted the instrumental music and musical instruments (stringed instruments of different kinds and also wind instruments). He extended this journey to nearly the whole of the region where the

[3] "Finland i Nordiska Museet," page 121.

ancient Finnish folk poetry still survived in almost undiminished vigour, i.e., to Carelia on both sides of the east frontier of Finland, to the area between the Vuoksen and the Neva or what is called the Carelian Isthmus, Ingria, and finally the home of ancient Esthonian song and the Esthonian language, in what were then the Governments of Esthonia (Reval), Livonia (Riga) and Pskov. Both in Ingria and on Esthonian territory he had abundant opportunity of hearing the popular music. He made a further expedition in the summer of 1879 within the borders of Finland, to Tavastland, Satakunta, Savolaks, etc.

Mr. Borenius-Lähteenkorva's chief studies of instrumental music were made on his travels in 1877 and 1879. He then met several jouhikantele players in the parishes of Ilomants, Suistamo, Sordavala and Jaakkima, made notes concerning them, their instruments and how they tuned them, wrote down melodies, and brought home a number of specimens. At least four bowed-harps, as well as a number of other instruments which he preserved are now in the National Museum in Helsingfors. (Cf. page 61 ff., Nos. 4, 8, 12, 13.)[4]

The notes of Mr. Borenius-Lähteenkorva's expeditions which have been available contain particulars about four jouhikantele players: Paavo Kurvinen, Jyrki Sissonen

[4] Unfortunately Mr. Borenius-Lähteenkorva has not yet published his material, so that the present writer has not had access to the whole of it, but has had to make the most of the scattered notes to be found in the archives of the Finnish Literary Society. Mr. Borenius-Lähteenkorva has also given verbal information about the places where bowed-harps were found, their tuning, etc., and in a letter dated May 1, 1923, gave the account of his journeys which is reproduced here, and supplementary information on various points.

and Heikki Honkanen from Ilomants, and Iivana Siitonen from the parish of Sordavala. Kurvinen had himself made his instrument of aspenwood and called it *jouhikas*. The two strings were tuned to F and A (also F sharp says a note in parenthesis). The player held the lower end of the harp in his lap, against his right knee, with the back resting against his left knee. By touching the A string with the upper surface of the fingers of his left hand he obtained the following scale: A, B flat, C, D, E. He played the melody in this scale, sounding the F string simultaneously. Among other airs he played "Voi minun, voi minun vaivainen poika" and "Kultani kukku," but out of tune. As colophon he used spruce rosin, which adhered to the back of the instrument. He said that similar harps could also be made of pine wood or alder. He used the following names for the various parts: *koppa* (resonating body); *kansi* (soundboard); *leukko* (sound-hole); *hepo* (bridge);[6] *kielet* (strings); *naulat* (pegs); *kapula* (the tail-pin); *jousi* (bow).

Sissonen, who belonged to a well known family of rune singers, said that instruments of this kind had never been numerous. He himself, however, had made three with two strings and two with three strings. He called his instrument *harppu*, and his words for the different parts were: *vipu*, *jousi* and *roka* (bow); *nastat*, *naulat* (pegs); *perä* (lower end); *naulapuoli* (upper or peg end); *emäkoppa* (resonating body). Sissonen had learned to play

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[6] Renvall, in his lexicon, translated *hepo* "assula sub fidibus violini," = *bridge*. The word *hepo* means horse, in Swedish häst. "Häst" does not appear to be used for the bridge anywhere where Swedish is spoken, but the bridge of the Norwegian *Hardanger violin* is so called. Cf. Hannaas, "Hardingfela," page 14.

the jouhikantele from two men from Kovero, Miihkali and Terettie Ratinen.

About Honkanen (born December 23, 1818) Mr. Lähteenkorva has only noted that he had come from Maukkula to the place where he was then living, and that he had sold one instrument to two rune collectors from Helsingfors before the year 1853, and another to Retzius in 1874. The note about Siitonen is equally concise. He had himself made his instrument of alder wood a few years before. The names which he gave were: *jouhkannel*, *jouhikas*, *jouhikko* for the instrument itself, *roka*, *vipu*, *kokkura*, *kokotin* (bow), *hepo* (bridge), *käensija* (hand-hole), *koppa* (resonating body). The strings were of horsehair and gut. The tuning is given as C^1, F^1.

As to the tuning, Mr. Lähteenkorva has stated verbally that the three-stringed instruments were sometimes tuned in fifths and sometimes to a fifth and a fourth. He had noted that one player did not use the third string.

Scanty though this information is, when examined in conjunction with the accompanying ethnographical material, it forms a substantial contribution to our knowledge of the bowed-harp, which seems to have been general in the regions north of Sordavala.

There are no notices of the bowed-harp from the last decades of the nineteenth century. It had then been completely overshadowed by the plucked *kantele*, the position of which, as the national instrument of the Finns, no one questioned any more. The ethnographical material which might have caused justice to be done still remained fairly inaccessible. It does not seem to have received much attention from investigators. It was not until 1911 that Dr. Väinö Salminen made enquiries as to the *jouhi-*

kantele, during a competition between musicians from Finnish Carelia, which was held in that year at Suistamo. He then obtained some valuable material about the three-stringed *jouhikko*. According to Dr. Salminen's notes, two of the strings were made of goose-gut; the third was "a silk string spun with silver wire." The soundboard was fixed to the body with glue, and its support (a soundpost) was of pine wood. The different parts of the instrument were called: *kahva* (finger-piece), *hepo* (bridge), *koppa* (resonating body), *kansi* (soundboard), *eäni reikä*, *sicrain* (sound-hole), *tappipuoli* (peg end), *perä* (lower end), *perälauta* (tailboard), *pellauta* (string-holder), *käentila* (hand-hole), *vipu*, *roka* (bow), *varpa* (bowstick). The old-fashioned tuning was a fifth and a fourth, G, D^1, G^1, but more recently tuning in fifths, G, D^1, A^1, had come into use. Old players of the plucked kantele could still show on their many-stringed instruments how the three-stringed jouhikantele had been tuned. One old man said that at first he had played a three-stringed jouhikantele, but he had gradually increased the number of strings to five (and naturally abandoned the bow), and he had now got up to as many as sixteen. The jouhikantele was said to have been general in the Sordavala district and northwards on the borderland some thirty to fifty years previously.[8]

Still later in the present century extensive and valuable additions to our knowledge of the bowed-harp have

[8] Information kindly furnished by Dr. Väinö Salminen, who had observed similar instruments in Carelia as early as 1906-8.

been made by Mr. A. O. Väisänen.[9] He obtained from harp players in East Savolaks, and Carelia detailed information about its existence, construction, tuning, etc., having discovered it by accident in Savolaks when travelling to collect folk melodies in the winter of 1912. A musician named Juho Villanen, of Savonranta, happened to mention that the instrument on which he learned to play was not a violin but a jouhikantele. In reply to questions he gave Mr. Väisänen a full account of the jouhikantele in the parish of Kerimäki, where he had lived in his childhood. There had been a musician there named Ierikkä Mutikainen, who played his *jouhikannel* at all weddings and dances, and he had been Villanen's teacher. Villanen said that at that time the violin was still unknown in the district, and added in support of this assertion that when a certain Heikki Lunni (Lund) had somewhere happened on the modern instrument, the people had asked: "How does one play that instrument, when the strings lie upon a neck an inch wide?" Many years later Villanen had learnt to play the violin at Savonranta, but he broke his instrument at a wedding. As he had not the money to buy a new violin, and felt that he absolutely could not do without some instrument, he thought: "Well, I suppose one can play a jouhikantele." He could make that himself, after Ierikkä's model, with two hand-holes (käsireikä) and horsehair strings. The young people of the neighbourhood, however, soon got tired of the bowed-

[9] Mr. Väisänen first communicated his observations in the autumn of 1916, in a lecture to the Musical Science Society which was afterwards published at the instance of the author. The lecture will be found in the Christmas number of "Säveletär," under the title, "Jouhikannel ja sen viimeiset soittajat."

harp and bought the old man a new violin. When Mr. Väisänen visited the place, the body of the old harp was being used as a box for nails, but he got it restored.[10] Villanen afterwards made several new bowed-harps. In the summer of 1913, he visited Helsingfors, and performed on his peculiar instrument in the Open Air Museum at Fölisö.

In the summer of 1916 Mr. Väisänen, again accidentally, met at Impilaks, on the Carelian frontier, two players on the bowed-harp, Juho Vaittinen, an itinerant "masseur," and Feodor Pratshu. The former had burned his harp, for religious reasons, but the latter still kept his, luckily, for thus both players were able to exhibit their skill. They also gave an account of their experiences, which were remarkable in several ways.

The very fact that the bowed-harp was thus proved to have been known in East Savolaks was in itself important, for evidence from that part of Finland had previously been rare. However, whether it had been at all common there did not appear. Villanen certainly said that the violin was formerly unknown, but his account suggests that bowed-harps were not numerous either. Conditions seem to have been different on the Carelian borderland, for Pratshu told Mr. Väisänen that six of his brothers had been jouhikantele players, and that there were plenty of others in the village of Koirinoja.[11]

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[10] This instrument is now preserved in the National Museum. Cf. page 93, No. 16.

[11] Väisänen met Vaittinen in the village of Hunttila. This and the neighbouring village of Koirinoja lie about forty-five kilometres east of Sordavala.

The harps which Mr. Väisänen discovered both in east Savolaks and in Carelia differed substantially in form from those previously known. Villanen's instrument, with its two hand-holes separated by a "centre piece," forms a distinct type. The origin of the left hand-hole is obscure, and the explanation given to Mr. Väisänen,

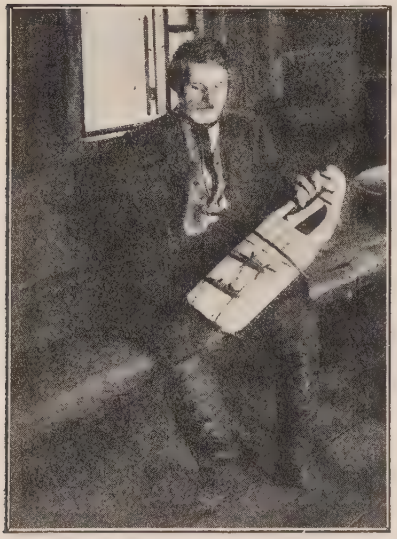


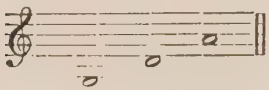
Fig. 7. Juho Villanen. *(Photo., A. O. V.)*

Fig. 8. Feodor Pratshu. *(Photo., A. O. V.)*

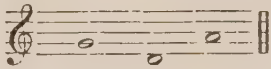
viz., the elimination of all unnecessary wood, is inadequate. There were probably technical reasons for it, though what these were is no longer known. The harp played by the Carelian musicians, again, had not only the not unusual indentation in the side opposite to the hand-hole, but similar incurvations in the middle of each side of the resonating body (cf. Fig. 22). Vaittinen had asserted that formerly all bowed-harps had straight

sides, wherefore Mr. Väisänen conjectures that these latter incurvations were Pratshu's invention. How this may be is difficult to decide, but in any case Pratshu's instrument forms another separate type.

Juho Villanen tuned his two-holed harp in fifths. The Carelian players, on the other hand, had raised the lowest string an octave.[12]



Villanen's tuning



The Carelian tuning

Whether the Carelian tuning is an individual variation, or whether it is the original one for the three-stringed harps, is hard to say. In any case it had not been observed in Finland before. Mr. Väisänen is inclined to regard it as original, because otherwise the position of the third string is difficult to explain harmonically. He played Villanen's old waltz to him, on a later visit to Savonranta, with the instrument tuned in the Carelian manner. Villanen admitted that the melody now sounded better, and did not deny that his teacher might have used that tuning; possibly the left string was tighter. But Mr. Väisänen could not obtain from him any definite statement.

Mainly to obtain supplementary information about the tuning, the present writer made an expedition to Kerimäki in the early spring of 1922. No direct information

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[12] In this work the tuning is given beginning from the left string. In his "Översikt" (the Hammarstedt-festskrift) the author gave the strings in the reverse order, following Mr. Väisänen.

could be got, but various facts were elicited which have an indirect bearing on the tuning. Mutikainen's instrument had been destroyed long ago, but a friend of his youth asserted that he was sure he could make a faithful copy of it. He made one of aspen wood, by request, and sent it to the author (cf. p. 62, No. 18). Mutikainen's daughter, who was still living, said that her father was the only musician of the place—thus confirming the view that bowed-harps were not very common in the locality—but otherwise she could only remember that the instrument was cut straight across at the upper end, and that in playing the old man moved his hand from one hand-hole to the other.[13] A similar statement was made by an old musician, Alfred Rask, from Anttola, who said that about ten years previously he had seen at Nyslott a harp player from the Joensuu district. This man used to visit the town every summer and entertain the inhabitants with his music, and Rask remembered that in playing he had moved his hand from one to the other of the hand-holes, which were both of the same size.

The statement that both holes were used in playing the two-holed bowed-harp may be regarded as correct, as it is supported from three different quarters. Both holes were then probably of the same size, as in the new Kerimäki harp, and as Rask said. Under these circumstances the Carelian tuning can hardly have been used on the two-holed harps. This much can be regarded as certain, that

[13] Villanen had also spoken of Mutikainen moving his hand when playing, but Mr. Väisänen had assumed this statement to be due to a misapprehension. (Verbal intimation from Mr. Väisänen.)

the two outer strings were played and the middle one was a bourdon; but how they really were tuned still remains doubtful.

The view that the Carelian tuning was general on the narrow-holed three-stringed instrument gains no support from the material of the strings, for the third one is usually either of coarse horsehair or a spun "bass."

As we have seen, the printed and manuscript notices about the bowed-harp in Finland are sporadic and few in number. Nevertheless they bear witness to the fact that Finnish researchers have paid no slight attention to the instrument. And they form an important basis on which to proceed in considering the evidence of folk poetry and the ethnographical material.

(B). Folk Poetry.

The impressive and beautiful story of the kantele's origin and Väinämöinen's playing is found in the fortieth, forty-first, forty-second and forty-fourth lays of the Kalevala, and shows the esteem in which the ancient Finns held musical instruments and their belief in the wondrous powers of music. There is an enormous number of variants of these, as of the other lays, some printed, and some preserved in manuscript in the archives of the Finnish Literary Society.

The kantele cycle tells how Väinämöinen, Ilmarinen and Lemminkäinen, on their way to Pohjola to carry off the Sampo, run their boat against the big pike. When the others have made vain attempts to kill it, Väinämöinen does so with his sword. The pike is dragged to land, cut up, and cooked, Väinämöinen looks at its jaws and teeth, and finds that they could be made into a kan-

tele, if only they had some one with the requisite skill. Finally, he himself undertakes the task, and makes the harp of pike bone, "an everlasting instrument of pleasure."

40.235.[14] Out of what did he construct it?
Chiefly from the great pike's jawbones,
Whence obtained he pegs to suit it?
Of the teeth of pike he made them;
Out of what were harpstrings fashioned?
From the hairs of Hiisi's gelding.

All who came were invited by Väinämöinen to examine the instrument and play upon it.

259. Played the young and played the aged,
Likewise played the middle-agéd
. . . . . .
But they drew no music from it,
Nor composed a tune when playing.

Väinämöinen took it to Pohjola, but even there nobody could handle it properly;

305. But no cheerful notes came from it,
And they played no music on it,
For the strings were all entangled,
And the horsehair whined most sadly.

On the advice of an old man, it was sent back to the hand of the master.

41.1. Väinämöinen, old and steadfast,
He the great primeval minstrel,
Presently stretched out his fingers,
Washed his thumbs, the harp for playing,
On the stone of joy he sat him,
On the singer's stone he sat him.

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[14] The quotations from the Kalevala are taken from W. F. Kirby's translation.

He took the instrument, inviting one and all to come and hear him, and then began to play on the pike-bone harp.

24. Now came pleasure after pleasure,
As the sweet notes followed others.

All the beasts of the forest, of the air, and of the water, came to hear the music. Both men and women wept, so wonderful was the song and so wonderful the play of the strings. Väinämöinen himself was moved to tears, which fell into the sea and were turned into pearls.

The heroes continued their journey to Pohjola, where Väinämöinen explained that they had come to share the Sampo, and if they were not given half of it freely they would take the whole by force. When Louhi, the Mistress of Pohjola, in wrath called her people together.

42.62. Summoned all her youthful swordsmen,
Bade them all to aim their weapons
At the head of Väinämöinen.

Väinämöinen took out his pike-bone harp and began to play, and

69. All who listened to his playing
Heard it with delight and wonder,
And the men were all delighted,
And the women's mouths were laughing,
Tears from heroes' eyes were falling,
Boys upon the ground were kneeling.

He sang the people of Pohjola to sleep, took the "sleep needles."

87. And their eyes he plunged in slumber,
And their eyelashes crossed tightly,
Locked their eyelids close together,
Sank the people all in slumber.

Then he sang outside the place in the copper mountain where the Sampo was kept, so that the doors opened, and he carried off the Sampo.

On the return journey from Pohjola a storm arose. The kantele fell into the sea, and Väinämöinen sought for it in vain. When he reached land he heard a birch tree lamenting, and said to it: "Soon shalt thou with joy be weeping; shortly shalt thou sing for pleasure." And he made a new kantele from the stem of the birch.

44.173. From the trunk he formed new pleasure,
And the frame of toughest birchwood;
From the mottled trunk he formed it.
A cuckoo called. Gold fell from its tongue.

195. And from this he made the harp-screws,
And the pegs from that provided.

But something was still wanting: "Five strings as yet are needed." In the grove Väinämöinen met a maiden waiting for her lover. Then he cried out:

221. Give thy hair to me, O maiden,
Give me of thy hair, O fair one,
Give me hair to form my harp-strings,
For the tones of lasting pleasure.

The maiden did so:

227. And she gave him five and six hairs,
Seven hairs she gave unto him,
That he thus might form his harp-strings,
For the tones of lasting pleasure.

Väinämöinen:

235. In his hands the harp then taking,
Very near he felt his pleasure.

He tuned the strings, put it on his knees, and began to play on the new birch harp. Then

289. There was not a single creature
But it hurried forth to listen,
And to hear the charming music
From the kantele resounding.

Folk poetry contains no more powerful or more detailed account of the origin of a musical instrument and the effect of its tones. Apart from the characteristic repetitions, which sometimes delay the action, the description is poetically perfect. The human need for a medium through which to express joy and sorrow, the belief in the divine origin of music, glorification of the art of making it, humble admiration for its tones, so supernaturally powerful, so full of feeling and suggestion—all is here depicted.

The lays about the origin of the kantele and Väinämöinen's playing are not wholly creations of the Finnish popular genius. They are the products of centuries of evolution, and some of the material has been borrowed and refashioned. The principal incident in the boat journey: Väinämöinen with his companions running against the big pike, dragging it to land, making a harp with the pike's teeth as pegs and the maiden's hair as strings, may be compared with the mediæval Scandinavian poem of the magic harp. In this latter a musician (or skipper, or pilgrim) runs his boat against the body of a young maiden, which he drags to land and makes into a harp, with the maiden's fingers as pegs and her hair for strings. There are further parallels in regard to the bow, which for the kantele is made of the pike's side-bone, for the harp from the maiden's arms. In both cases the

instrument has supernatural powers.[15] Väinämöinen's feats in Pohjola, again, where he put all to sleep with his playing so that the heroes could carry off the Sampo, can be paralleled in the Irish legend of the second battle of Magh Tuireadh, between the inhabitants and a horde of pirates called Fomorians. It relates how three champions pursued the Fomorians to regain the stolen harp, and came to the enemy's camp, where Dagda played his three masterpieces. During the first the women shed tears, during the second the youths burst out laughing, and when he played the third piece all fell asleep.[16] Then the three champions fled from the Fomorians, who had meant to kill them.[17] The curious name of "the joy" given to the harp in the Finnish folk-songs finds a parallel in "the tree of joy," a term used for the harp in the song of Beowulf Other comparisons can be drawn from traditions current among the players, popular ideas of the water sprite and the sea nymph, and so on.[19]

The account given in the "Kalevala" is to a large extent Lönnrot's creation. He not only arranged and combined the lays which he took down from the lips of the people, but himself added episodes in order to give them unity and greater force. To take one example, Professor

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[15] Grundtvig, DgF. 95, "Den talende Strengeleg." Geijer-Afzelius, "Svenska Folkvisor," 16. Den underbara harpan.

[16] The same story is current in Arabic sources, but with a different hero each time. Ibn Khalli-kān, Biog. Dict. III, 309; Ikhwān al-Safā'; H. G. Farmer, Mus. Assoc. Proc., 1925-6, page 107. (Editor.)

[17] O'Curry, "On the Manners and Customs of the Ancient Irish," III, page 212.

[19] Norlind, "Studier i svensk folklore," page 120 ff.

Kaarle Krohn has pointed out the difficulty of combining into one narrative all the incidents found in the numerous variants of the kantele lays. Lönnrot could not represent the kantele as made of fish-bones and of birch wood at one and the same time, so he was obliged to let one be lost and another be made in its place.[20] He added the birch's lament after a model from other songs; it is unknown in the popular lays, as Professor Niemi has shown. Lönnrot's untiring activity in working up the material, improving and supplementing it, as well as the greatness of his skill, may be clearly seen by comparing the different editions; "Väinämöinen," "Runokokous Väinämöisestä," the old Kalevala, and the new Kalevala with its numerous additions.

A comparative study of the whole kantele cycle is outside the scope of this work.[1] Our present object is simply to examine the instrument described in the folk-songs. The description in the Kalevala itself leaves no room for doubt as to the connection between Väinämöinen's fish-bone kantele and the instrument preserved among the peasantry in many parts of Finland, the kantele with five strings which was plucked with the fingers. Accordingly this kantele alone has been given the place of honour as the national instrument of the Finns. But the variants seem to show that the singers sometimes had another instrument in mind, one played with a bow, and we must therefore now consider what place a bowed instrument—a jouhikantele—holds in the Kalevala material.

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[20] Krohn, "Kalevalan runojen historia," page 126 ff.

[1] Krohn has made a thorough study of the lays in "Kalevalan runojen historia," but his conclusions are now open to correction in several points.

Even Lönnrot's conception of the instrument seems to have been vague and changeable. He must have been well acquainted with both the five-stringed, plucked, and the two or three-stringed, bowed, kantele, and also with the discussion as to their relative ages which had been going on ever since the days of Porthan. It may be supposed that the vague description in the lays made him hesitate at first. Two strings are mentioned in the additions and improvements to "Runokokous Väinämöisestä," which he sent to K. N. Keckman in a letter dated Kajana, March 14, 1834 (wherein the whale is given as the material), in the marginal notes to that collection,[2] and in a variant from Nurmes.[3] Lönnrot put the five-stringed kantele into the Kalevala, but he appears also to have considered representing it as a two-stringed instrument.

There is no need to give here an account of the gradual shaping of the kantele cycle, partly because most of the features appear in the variants, and also because Lönnrot himself took so active a part in forming the material. On the other hand, the variants must be summarised, so that the instrument described in them may be compared with the specimens preserved.[4]

The *Esthonian* variants seem to put most stress on the different parts of the instrument. One lay enumerates the kantele itself, its back, soundboard, neck, pegs, strings and bow. Professor K. Krohn regards this list as

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[2] "Kalevalan esityöt," Suomi III, 5, page 89.

[3] "Vanhan Kalevalan eepilliset ainekset," page 175—Lönnrot, A, II, 3 No. 4.

[4] The folk-lore material given in the Swedish edition of this work has here been omitted.

more than complete,[5] and it would indeed be so if the plucked kantele were meant. But the lay can and should also be read in the light of a bowed instrument, and the only one which need here be considered, the bowed-harp, has something to correspond with every detail mentioned.

The variants are all the more difficult to interpret, as they sometimes give a kind of collective description, explaining the material of the harp itself in abundant detail, and at the same time mentioning other materials for certain of its organic parts. Thus, the harp is said to be made of wood, of one kind or another, while the jawbones of a fish are given as the material of the back. The traditions often lack exactitude in giving the source of the details. Epithets have been exchanged and confused. When the singer had forgotten, or perhaps never known, what the instrument was like, he has often unconsciously transferred the material of one part to another, as when the maiden's hair, which usually forms the strings, is said to be the material of the harp itself, or when the strings are said to be made from the jawbones of a salmon.

The Esthonian variants call the instrument not only *kannel* but also *viiul*, which latter word is probably a direct corruption of violin. It may be questioned whether the name has anything to do with the construction, but it is noteworthy that of the twelve variants which use the name *viiul*, nine give the material as wood of different kinds. A bow for the *viiul* is mentioned five times, when it is twice made of the maiden's fingers, twice of the side-bone of the swan, and once of white maple.

Thus the material is sometimes wood, and sometimes

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[5] Krohn, "Kalevalan runojen historia," page 63.

fishbones.[6] The majority of the variants give different woods for the harp itself, while the back, "boards," and soundboard are usually said to be made from the fish's bones. The woods enumerated are birch, maple, oak, apple, hazel, lilac, bird cherry, and juniper, nearly all of them hard woods. The birch of which the harp's body was made is said to have grown up from the body of a murdered maiden. In three places where hard woods are named, the expression "from a foreign land" is used in a context where it might possibly be taken as referring to the origin of the kantele. When fishbones are mentioned, they are usually the jawbones of a salmon. The pike's teeth are named in a few cases, but these belong originally not to the resonating body, but to the pegs.

The strings are made of the maiden's hair in practically all the variants. Their number is only indicated once,[7] in a passage which states that they were taken from four different, named towns. This can presumably be taken to mean four strings.

The mention of a neck, made from the knee-bones of the reindeer, and different woods, suggests a bowed instrument, as does also the name *viiul*, and still more the mention of a bow.

The *Ingrian* variants contribute but little to the history of the kantele. They give few details. The instrument itself is generally said to be made of animals' horns, probably owing to a confusion between the lays about the kantele and those about the big ox and the ram. Descriptions of the kantele only occur in a scattered, episodic

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[6] K. Krohn thinks there is a confusion between two different lays.

[7] Cf. *ante*, page 73. "Kalevala," 44, 227. (Editor.)

form, and there is no entire variant of the lay about its origin. Nevertheless it has a definite position in the Ingrian lays, which must correspond to some precise conception. It is for the student of folk poetry to explain the nature of this conception, and also why the kantele appears in lays dealing with some other episode.

It is difficult to decide how far the Ingrian variants have been influenced by the Esthonian ones. There are a number of direct echoes, e.g., where the harp is said to be made of fishbones (at the same time as elk horns), or of "the pale maple." The expression "the elk's teeth" is naturally an echo of the pike's teeth as the material of the pegs, which are made of the pike's teeth in the only other instance in which they are named. As in Esthonia, the strings are made of the maiden's hair, but we find a new term: the hair of the Tuoni maiden.

The Ingrian variants occasionally give the number of the strings. Two strings are mentioned four times, and twice "the middle string," which may be taken to indicate that there were three. Five strings are given in six variants. The number of strings is sometimes named in connection with the soundboard, but no material for the latter has been noted. When two soundboards are mentioned it is still possible to conceive the instrument, but when it comes to two strings and six soundboards the information loses all significance.

The variants from *Finnish Carelia* are rather like the Esthonian ones, but the enumeration of details is less complete. The only organic parts named are the resonating body and the soundboard, and each of them only a few times. Fish take the first place as material, often "the evil pike" or "the pike of Hell," and sometimes the

salmon. The "spawning perch" and "the big roach" are each named once, the former as material of the instrument itself, and the latter for the soundboard. The elk, known from Ingria, reappears in a few variants, once as the elk of "Hiisi, the Evil One." The strings are of human hair or horsehair. The maiden is conceived as a spirit of nature, often an evil spirit: "the maid of Hell," the "harlot, or hag of Hell," "the evil mistress." The horsehair is taken from the stallion or "the good horse." The pegs are made from the teeth of "the big pike." The name "Hiisi pike" shows that it also is conceived as a supernatural being. "The teeth of the big ox" and "the devil's thumbs" are each mentioned once as material of the pegs.

The variants from Olonets follow in general the same lines, only they are more concise. Apart from the instrument as a whole, they only mention the resonating body. New features are "the fish's fins," "the pike's shoulder-blade," and "the hip-bone of the water dog," for the harp itself, and for the body "a joint of the elk's tail," and the "whispering fir." Hair from the stallion's tail takes the first place as material for the strings, and is here a practical material. The pegs are made only of the pike's teeth.

The kantele lays seem to have been most widespread in *Russian Carelia*, far up in the north. The number of variants from here is nearly a hundred. As in Finnish Carelia and Olonets, the names *harppu* and *soitto* occur as well as *kantele*. Here, too, the resonating body is the only part named, apart from the instrument as a whole. On the other hand, the bow, otherwise only found in the Esthonian variants, now reappears.

In regard to material, the variants from Russian Carelia include practically all the substances already mentioned, though wood, "the whispering fir," is the least frequent. Rich fantasy and flowing lust of song have introduced a number of new episodes, which are still gathered from the wealthy treasurehouse of natural symbolism. The description of the fish parts of which the instrument is made is often fuller. They are said to be pieces of bone, or a fish skeleton, probably a reminiscence of the account of Väinämöinen's raking in the sea, when he finds the bits of bone and makes of them his kantele. The salmon also appears, which is especially remarkable. A novelty in the way of material is the bones (skeleton) of the wild duck, and a duck-bone kantele is mentioned no less than eighteen times in lays from the most northerly regions. "The tip of the eagle's claw" occurs in one solitary instance.

The string material also presents new features. Beside the "Hiisi maiden," who is here thrust into the shade, we have "the weeping maiden," who may have been taken from real life—referring to the well-known "weeping women" of these regions—but may also be connected in some way with ideas about the character of music and the effects of its tones. The horse who furnishes the material for the strings is now called "the running one," "the spirited one." Horsehair is also the material of the stringing of the bow in the only passage where this particular is mentioned. Even if the attributes of the horse seem to hint at a supernatural being, the picture is realistic, for the strings of the bowed-harp and its bow are in fact made of horsehair.

The pegs are here made of the pike's teeth, as in the

other localities, except in one case when "Tuoni's prickly seed" is named as their material.

Appended is a tabular summary of the main features in the variants, which shows that the jawbones of salmon or pike, pike's teeth, and maidens' hair are the most frequent materials for the different parts. The basis of mystery is emphasised by such expressions as the "*Tuoni*" (dead man) or "*Hiisi*" (Evil One, the god of the forest) maiden, "Hiisi" pike, etc. It is noteworthy that in the majority of cases the harp owes its origin to various water creatures, the salmon, pike, and "water dog" (seal), while the maiden whose hair plays so prominent a part can be connected with the sea nymph. She often appears in Scandinavian folklore with long hair,[8] a hollow back (like a kneading trough), and a long tail. Sometimes her body ends in a pike's tail, she is half woman and half fish, or simply resembles a big pike.[9] An analogy to the kantele made from a skeleton may be found in a Danish belief that the water sprite carries a harp made of "dead men's bones."[10] Connecting links between the maiden of the Scandinavian lays and the fish or seal of the Finnish ones exist in the lay about "The Fishing of Vellamo's Maiden" *(Vellamon neidon onginta)*, and in the west-northern sagas about the seals which leave their haven and appear among mankind in the shape of women.[11]

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[8] Landtman, F. S. F., VII, 1, page 663 ff.

[9] Norlind, "Studier i svensk folklore," page 96 f. Among the Finno-Ugrian peoples also the "water mother" (ved'-ava) appears both in human form and as a big fish. Cf. U. Holmberg, "Die Wassergottheiten," page 133.

[10] Feilberg, "Ordbog," s.v. nökke.

[11] "Faeriske Folkesagn," opt af V. U. Hammershaimb, Antiquarisk Tidskrift, 1849-51, page 190.

GEOGRAPHICAL SUMMARY OF THE MATERIAL OF WHICH THE INSTRUMENT IS MADE.

Part	Esthonia	Ingria	Finnish Carelia	Olonets	Russian Carelia
1. Whole instrument	Different woods. Salmon	Horn (elk, ox, ram). Fish. Wood	Fish (pike, salmon, perch). "Kneebone of the elk" (Hiisi-elk)	Fish (pike-bones). Seal	Fish (pike, salmon). Duck-bone-fish fin. Tip of the eagle's claw. Joint of the reindeer's tail
2. Resonating body (back)	Jawbones of salmon		Jawbones of pike (Hiisi-pike)	Joint of the reindeer's tail. The whispering fir	Fishbones. Root of (the whispering) fir. The bird cherry tree
3. Soundboard	Salmon (haddock) bones. Wood	Salmon's tail	Salmon's tail. Tail-bone of the big pike. Scales of the big roach		
4. Neck	"Kneebone of the elk"				
5. Strings	The maiden's hair. (Mentioned in four places)	The maiden's (Tuoni-maiden's) hair	The maiden's hair. Hair of the Hiisi-maiden (the evil hag). Horsehair from the stallion	The Hiisi-maiden's hair. Horsehair from the stallion	Hair of the weeping (Hiisi) maiden. Horsehair from the running horse
6. Pegs	The pike's teeth	The pike's teeth	The pike's (Hiisi-pike's) teeth. The devil's thumbs	The pike's teeth	The pike's teeth. Jaw-bones of the salmon
7. Bow	Side-bone of the pike. Side-bone of the swan. The maiden's finger-bone. Wood				The horse's hair

This is not the place to discuss the source of the lays, or the mutual connection between the different forms of lay and saga, more fully than is necessary for the object of the present work. The wider question belongs rather to the realm of folk poetry. But it had to be mentioned here, because the materials used in making the kantele show how carefully one must go to work in comparing folk poetry with the ethnographical material in order to discover the nature of the instrument indicated. It is not possible to construct a harp of fishbones with pegs made of pike's teeth and strings of a maiden's hair. Neither can one create a tradition that such an instrument was used in ancient times. The popular description is ultimately based on a widespread belief in the supernatural origin and power of music, a belief which was attached to quite different types of musical instruments.

All the same, it would certainly be an error to deny to folk poetry all significance in the study of the instruments used by a people which has preserved sagas and songs describing music. Even the enumeration of the different parts has its importance, for it presupposes at all events that certain types of instruments were known.

The description in the Kalevala lays has hitherto been applied to the plucked kantele practically without question. But it has been shown that numerous variants, especially in Esthonia, represent the kantele as a bowed instrument. In view of the mystical character of the material and the way it has been split up, the fact that one instrument is suggested oftener than the other is naturally of slight importance. We have only to hold fast to the fact that *the bowed kantele does occur in the folk poetry*, and was therefore known to the ancient Finns.

(c). The Ethnographical Material.

The instruments preserved in museums and private collections naturally form the most important material for the study of the character and construction of the bowed-harp. As stated above, several of the investigators named in the preceding section obtained possession of the instruments which they discovered, and have since added them to the ethnographical collection in the National Museum in Helsingfors. Specimens brought home by collectors who have not yet been named have still further augmented this collection.

The narrow-holed bowed-harp has only once been observed in the area where the Esthonian language is spoken. It is recorded in a note in the Reinholm collection, which reads as follows: "Kantele in Esthonia, two-stringed, a hole in the upper part of the neck, through which the left hand is inserted. Different notes are obtained by pressure of the back of the fingers against the strings. The upper surface of the fingers of kantele players is therefore seen to be streakily marked."[12] No such instrument known to be derived from Esthonia exists in either Finnish or Esthonian museums.[13] Two examples of the wide-holed bowed-harp have been found on the island of Dagö, but they seem to be referrable to the Swedish colony on that island. There is, however, additional evidence that the Esthonians were acquainted

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[12] Reinholmska samlingen, No. 32.

[13] Professor A. M. Tallgren, of Helsingfors, has made careful search in the Esthonian museums, with negative result.

Fig. 9. (No. 1.)

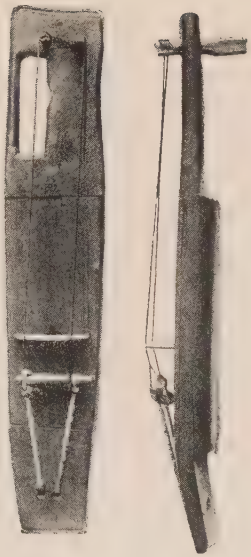

Fig. 10. (No. 2.)

Fig. 11. (No. 3.)

Fig. 12. (No. 4.)

Fig. 13. (No. 5.)

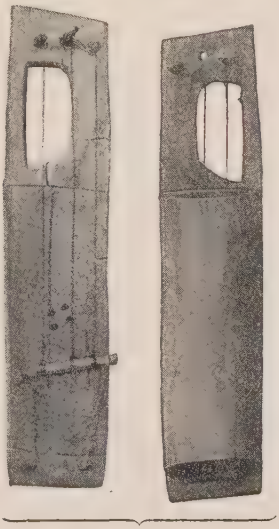

Fig. 14. (No. 6.)

Fig. 15. (No. 7.)

Fig. 16. (No. 8.)

with the bowed-harp in the fact that their language has a word for it, "*Wibukannel.*"[14]

The bowed-harps known to the author are eighteen in number, eleven in the National Museum, Helsingfors, two in the Sordavala Museum, two in the Nordiska Museum, Stockholm, two in the author's possession, and one belonging to Mr. Väisänen.

The museum catalogues give only deficient accounts of them. In the case of two specimens in the National Museum, Helsingfors, there is no information as to when or from whom they were obtained. Four other specimens secured by Mr. A. A. Borenius-Lähteenkorva, were presented at some time without any information as to their provenance. The catalogue information as to these was supplemented in the early spring of 1922, when the author took them to Kexholm, where Mr. Borenius-Lähteenkorva lives.[15] That gentleman readily gave the principal particulars about them, and, moreover, held out a prospect that he would put together the observations he had made in the years 1877-8.

The Finnish instruments are enumerated in the following catalogue, which is restricted to the most important particulars for the sake of uniformity, and will be supplemented in what follows.[16]

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[14] Wiedemann, F. J., "Estnisches-Deutsches Wörterbuch." "Wibukannel, die mit dem Bogen gestrichene Harfe."

[15] The instruments were lent for this purpose by courtesy of the late Government Archæologist, Prof. Hj. Appelgren-Kivalo.

[16] The information from the Nordisk Museum has been supplied by Prof. Nils Lithberg, and that from the Sordavala Museum by Dr. Uno Karttunen.

1. "*Jouhikantele*" from the parish of Kesälaks, Carelia. Length 60 cm., breadth 9 cm., depth 7 cm. Birch wood body with rounded, trough-shaped back; pine soundboard, fastened to the body with wooden pins and a band of birch bark. Two strings of black horsehair. String-holder in the form of a horizontal wooden pin, fastened to the instrument by two cords. Posterior pegs. Sound-hole cross-shaped. Obtained by K. Collan and given to the Finnish Literary Society on October 4, 1854. National Museum, No. 723.

2. "*Jouhikas*," from Pirhunvaara, parish of Ilomants, Carelia, about 5 kilometres from the east boundary of the parish. Length 54 cm., breadth 10 cm., depth 4 cm. Aspen body (according to Mr. Borenius-Lähteenkorva), with flat back. Pine sound-board fastened with brads, earlier by a band of birch bark, the marks of which are visible. Horsehair strings. String-holder as in the preceding, fastened with cords. Posterior pegs. Cross-shaped sound-hole. Blackened by smoke and much worn. Obtained by Mr. Borenius-Lähteenkorva in 1877. Bought from a forester, Paavo Kurkinen. National Museum, No. 1,855, 28.

3. "*Jouhikantele*," Kiihtelysvaara, Carelia. Length 63 cm., breadth 11 cm. at upper end, 9 cm. at lower end, depth $4\frac{1}{2}$ cm. Birch body with flat back. Birch sound-board. String-holder as in the foregoing, fastened with two leather thongs. Bridge new, probably added later. Posterior pegs. Three small, round sound-holes. Obtained by Karl Collan, and presented to the Finnish Literary Society on October 4, 1854. National Museum, No. 722.

4. "*Jouhikannel*," Korpiselkä, Carelia. Length 64 cm., breadth 11½ cm., depth 6 cm. Aspen body, rounded back. Pine soundboard. Round sound-hole. Horsehair strings. String-holder as on the foregoing, fixed with cords. Added to the Museum collection before 1899. National Museum, No. F. 1,175.

5. "*Jouhikantele*," Suistamo, Carelia. Length 83 cm., breadth 12½ cm., depth 9½ cm. Roughly cut out of aspen, with rounded back. Pine soundboard, fastened with nails. String-holder, pegs and sound-hole as in No. 1. Spun horsehair strings, the melody one finer than the others. National Museum, No. F. 187.

6. "*Kantele*," Eno, Carelia. Length 62 cm., breadth 13 cm., depth 8 cm. Pine body and soundboard, rounded back. Three horsehair strings (number of hairs I, 15; II, 22; III, 31). Given to Dr. G. Retzius by Mr. Veisell, and by Retzius and E. Nordenson to the Nordisk Museum in June, 1876. Nordisk Museum, No. 11,078.

7. "*Kanteleharpa*," Eno, Carelia (a later statement says from Ilomants). Length 65 cm., breadth 15 cm., depth 9½ cm. Pine body and soundboard, rounded back. Three horsehair strings (I, missing; II, 24; III, 36 hairs). Presented as No. 6. Nordisk Museum, No. 11,079.

8. "*Jouhikannel*," Sordavala, Carelia. Length 40 cm., breadth 14 cm., depth 6 cm. Alder body, rounded back. Spruce soundboard, fastened (probably) with glue and three bands of birch bark. Black horsehair strings. Blackened by smoke and much worn. Obtained in 1877 by Mr. Borenius-Lähteenkorva. Bought from Iivana Mitreinpoika (a Greek Catholic). National Museum, No. 1,855, 29.

Fig. 17. (No. 9.)

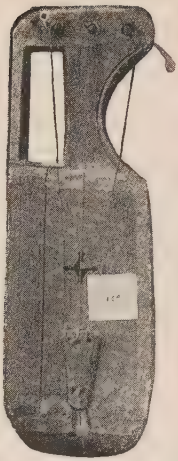

Fig. 18. (No. 10.)

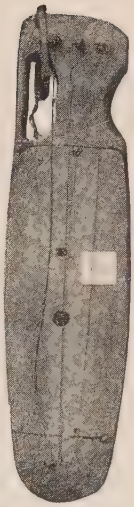

Fig. 19. (No. 11.)

Fig. 20. (No. 12.)

Fig. 21. (No. 13.)

Fig. 22. (No. 14.)

Figs. 9-22. Narrow-holed bowed-harps from Carelia. (Modern.)

9. "*Jouhikko*," Impilaks, Carelia. Length 57 cm., breadth 14 cm., depth 6 cm. Pine body with flat back. Spruce soundboard, fastened with nails. Obtained in 1916 by Mr. O. Väisänen. Bought from Feodor Pratshu. National Museum, No. F. 2,141.

10. "*Jouhkannel*," Sordavala, Carelia. Length 44 cm., breadth 14 cm., depth 5 cm. Body hollowed out. Soundboard inset both at ends and at the sides and glued on. Strings of thread coated with pitch. Obtained in the eighteen-eighties by Dr. O. A. Hainari. Sordavala Museum, No. 528.

11. "*Jouhkannel*," Suur-Mägi, Olonets. Length 67 cm., breadth 17 cm., depth 5 cm. Pine body, soundboard fastened with nails. Thread strings coated with pitch. Looks old. Bought in the eighties by Dr. O. A. Hainari. Sordavala Museum, No. 510.

12. "*Jouhikantele*," Suistamo, Carelia. Length 55 cm., broadth 19½ cm., depth 6½ cm. Pine body with rounded back. Spruce soundboard, fastened with nails. Two gut strings, the third spun gut. Looks old, blackened by smoke and much worn. Obtained in 1877 by Mr. Borenius Lähteenkorva. National Museum, No. 1,855, 31.

13. "*Jouhikantele*," Sordavala, Carelia. Length, 40 cm., breadth 16 cm., depth 6 cm. Alder body, with flat back. Spruce soundboard, fastened with nails. Two gut strings, the third spun gut. Looks old. Obtained in 1877 by Mr. Borenius-Lähteenkorva. Bought from Matti Koikkalainen. National Museum, No. 1,855, 30.

14. "*Jouhikko*," Impilaks, Carelia. Length 50 cm., breadth 16 cm., depth 7 cm. Birch body. Spruce sound-

board. Horsehair strings. Looks fairly new. Obtained in 1916 by Mr. O. Väisänen, who bought it from Feodor Pratshu. National Museum, No. F. 2,140.

15. "*Jouhikko*," Savonranta, Savolaks. Length 57 cm., breadth 15 cm., depth 7 cm. Aspen body, with rounded back. Aspen soundboard, fastened with brads. Three horsehair strings. Two hand-holes. Made by Juho Villanen. Bought by Mr. A. O. Väisänen. Property of the author.

16. "*Jouhikannel*," Savonranta, Savolaks. Length 58 cm., breadth 19 cm., depth 9 cm. Birch body, rounded, and of ancient date. Soundboard and finger piece of one piece of aspen. Three strings. Two hand-holes. The hollowed out back was used as a nail box until 1912 when Villanen restored it at Mr. Väisänen's request. National Museum, No. F. 2,055.

17. "*Jouhikantele*," Savonranta, Savolaks. Length 55½ cm., breadth 13½ cm., depth 6 cm. Aspen body, with rounded back. Aspen soundboard, fastened with nails. Three horsehair strings. Two hand-holes. Made by Juho Villanen. Property of Mr. A. O. Väisänen.

18. "*Jouhikantele*," Kerimäki, Savolaks. Length 60 cm., breadth 17 cm., depth 13 cm. Aspen body, pine soundboard, fastened with nails. Three white horsehair strings. Bridge and string-holder combined in a flat, rounded piece of wood. Anterior pegs. Two hand-holes. Made at the author's request by a childhood's friend of Ierikkä Mutikainen, a harp player long since dead. Property of the author.

The woods used for the body are aspen in six cases,

birch in four, pine five, and alder two (not including one of the Sordavala instruments). Thus twelve specimens are made of hardwood and five of soft. All the two-stringed harps and those of the three-stringed which appear to be the oldest—as well as the newest one—have hardwood backs. Mr. Borenius-Lähteenkorva, Mr. Väisänen, and the present writer, have all noted that aspen is considered the right material, and this wood is also the most frequent in the specimens preserved. The fact that hardwoods were so generally used for the body may be due to experience gained in the course of ages that such woods are acoustically best and easily worked; it may also be due to the experience gained in the construction of other instruments, subsequently borrowed by the Finns.[17] Finally, the custom may also be referred to the supernatural power which was attributed to certain woods.

The soundboard is in general of a different wood from the back, pine in six cases, spruce in five, birch one, and aspen four; eleven cases of softwood and five of hard.[18] So the woods found most suitable in the manufacture of more highly developed instruments seem to have been adopted already at this primitive stage. It is surely very remarkable that spruce, which is still used for the soundboard of the modern violin, should be found so often in that of the bowed-harp. Probably, however, one may assume that here suitability was the only guide. The soundboard is pierced by one or more soundholes, of vari-

[17] The Russian gusli was made from the plane tree. Cf. Famintsin, Gusli, s. 67.

[18] No information is available as to the soundboards of the Sordavala instruments.

ous shapes. The significance of cross-shaped sound-holes, not only from an acoustic, but also from an ornamental point of view, will call for fuller treatment in a separate chapter.

The *dimensions* of the Finnish bowed-harps are small. The greatest length is 83 cm., greatest breadth 19.1, and the greatest depth 9.1 cm., except for the modern Kerimäki harp, which is 13 cm. deep, but was obviously given so disproportionate a form by mistake. The minimum dimensions are 40, 9, and 4 c.m., the averages 57.5, 14.1, and 6.9 cm.

The *resonating body* of all these harps is hollowed out, and is placed in the middle of the instrument's length, but extends over its whole breadth. Like the instrument as a whole, it is usually rather wider at the top than at the bottom. In the most primitive harps known it is very undeveloped, occupying less than half of the total length, and in some cases being only very slightly hollowed. In No. 2, for example, the distance between the back and the soundboard is only 3 cm. The back is most often rounded, trough-shaped, sometimes flat. If the latter, the sides partake of the nature of ribs.

The piece which forms the back extends beyond the resonator at each end. The upper end, finger-piece, contains the hand-hole on its right side, and above it two or three holes for the pegs, which are inserted from the back. The hand-hole is necessary for the peculiar technique—stopping the strings with the upper surface of the fingers or the nails. It is 10-12 cm. long—about the span of a hand—and 4-5 cm. wide. As this part is convenient for holding the instrument as well as essential for playing it, the finger-piece has sometimes been called the "handle,"

which has been a source of much confusion. Both sides of the hand-hole seem originally to have been straight, but later, especially in the three-stringed instruments, the left (inner) side has been somewhat curved to the shape of the hand. Sometimes the hand-hole is made wider, but it is uncertain whether the object of this is that the

Fig. 23 (No. 15.)

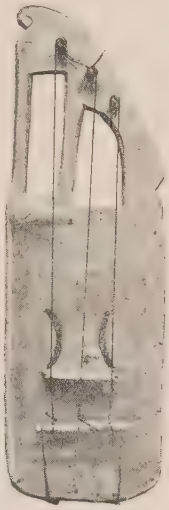

Fig. 24. (No. 16.)

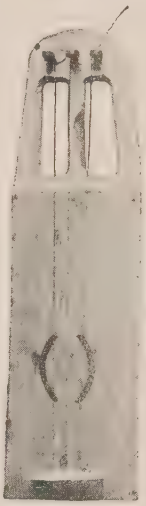

Fig. 25. (No. 18.)

Figs. 23-25. Two-holed bowed-harps from Savolaks. (Modern.)

second string may also be stopped. Nos. 6 and 7 have the widest hand-holes, but even here one cannot positively decide whether the fingers of the left hand could reach the second string.

The bowed-harps with *two hand-holes* form a separate group. Mr. Väisänen obtained the first news of this type from Juho Villanen at Savonranta, and its existence has since been confirmed by Alfred Rask and others (see p. 69).

The pegs are placed above the hand-holes, at the upper end of the instrument. They are either in a row across the end, or in a few cases the middle one is placed rather higher than the other two. In one narrow-holed Carelian harp and two of the two-holed Savolaks instruments they are placed obliquely (Figs. 9, 23, 24). It is hard to say whether this is because the end of these specimens, contrary to custom, is cut obliquely, or whether the left-hand strings were purposely shortened, and the instrument then cut to suit the pegs.

Dr. Norlind thinks that the irregular placing of the pegs, which makes the middle string longer than the outer ones, is evidence that the Carelian tuning was original,[19] but there seems to be little ground for this view, as one of the two-stringed bowed-harps, which are earlier than the three-stringed, has the pegs set obliquely. A later section will discuss what deductions can be drawn from a comparison with the Southern Slav *vijalo*.

The finger-piece does not form a neck. It certainly is thinner than the resonating body and lies in the same plane with the soundboard, but it is as wide as the resonator, and indeed sometimes the widest part of the whole instrument. Nothing has been recorded as to the purpose of the indentation opposite the hand-hole, which occurs in six of the Finnish specimens. As the bowed-harp is held resting against the left thigh just about the spot where the indentation is made (especially when the instrument is short), its object is probably to give support. This supposition is endorsed by the marks of wear apparent in the indentation, and not contradicted by the fact that

[19] "Svensk Tidskrift för musikforskning," 1922, page 118.

Juho Vaittinen holds the incurvation in the resonating body against his left knee. In any case, the purpose of the indentation is not to stop the strings from the left side, for in these harps the third string is of spun gut, and was obviously a bourdon. It is another matter that if one imagines the wood outside (to the right of) the hand-hole removed, the curved inner side of the hole and the indentation do, in fact, make the finger-piece into a neck, and give the harp a strong resemblance to a number of mediæval fiedels.

The piece which forms the back, projecting below the resonating body, forms the *tailboard*, which, like the finger-piece, lies in the plane of the soundboard. In the tailboard there are two holes, through which the cords of the string-holder are threaded. In early specimens, where the tailboard is long, these holes lie at some distance from the resonating body, with the result that the string-holder is placed at or near the resonator's lower end. Gradually the holes are brought nearer, and finally —in most specimens—are quite close to the resonator. But then the tailboard has shrunk up into a short, cross-cut, semicircular, or pointed tail. The fastening of the strings is thus very peculiar. Professor Sachs says that this detail deserves the greatest attention, "because it forms the most typolgically important characteristic."[20]

In point of fact, the primitive tailboard of the bowed-harp has an obvious relationship to the button of the violin. The original form seems to have been the slip of wood between the holes in the tailboard of the bowed-harp, which grows smaller and smaller in the course of

[20] Sachs, "Handbuch," page 126.

development, and comes nearer and nearer to the resonator. The Swedish three-stringed bowed-harp (Fig. 53) shows what it looks like when the unnecessary wood surrounding it is eliminated. The fastening of the strings or string-holder on the Swedish nyckel-harpa is at the same stage of development, as also that on a number of mediæval fiedels.[1] It is accordingly not inconceivable that even in the fiedel this detail denotes an advanced phase which has been preceded by a more primitive one—possibly by the bowed-harp's tailboard with two holes.

An examination of the resonating body, finger-piece, and tailboard of the different bowed-harps reveals a perfectly normal development from an acoustic point of view. Two two-stringed harps and one three-stringed have a resonator which occupies less than half the whole length of the instrument. The finger-piece is so long that the hand-hole lies a couple of centimetres from the resonator. The tailboard of the most primitive instruments is also quite unnecessarily long. But the resonator develops at the expense of the parts which project above it and below, which were soon reduced to no more than the necessary dimensions. The hand-hole, and also the holes for fastening the string-holder, are brought close up to the resonator, the size of which is still further increased by the sides being slightly curved outwards.

We see, therefore, that not even the simplest of the existing bowed-harps represents a primary form. Even when the resonating body occupies less than half the total length it is in process of evolution. But whether one should conceive the bowed-harp to have been originally

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[1] Sachs, op. cit., page 172.

quite devoid of a resonator, or whether it was at first bowl-shaped, or possibly hollowed out at the back and open, like the primitive Finnish forms of the plucked kantele —on this point no opinion can be expressed so long as all evidence is lacking. Professor Sachs says that the bowed-harp—which he calls "bowed-lyre"—"evidently comes from the *brettzither*."[2] It seems a little bold thus to name its precursor. The bowed-harp and the *brettzither* differ so widely, both in construction and in manner of playing, that the connecting links should be positively known before it is assumed that the former has developed out of the latter.

Passing now from the actual body of the instrument to the parts inorganically connected with it, we find that the evolution of the latter has followed step by step with the changes in the body.

The tailboard, the phases of which were described above, leads to the *string-holder*. This consists in its most primitive form of a round wooden pin, 7-9 cm. long, and placed horizontally. Such a horizontal pin occurs in all the two-stringed and six of the three-stringed instruments; the others have a wedge-shaped wooden string-holder similar to the tailpiece of a violin, sometimes with holes and sometimes with a little knob at the lower end which is fastened to the tailboard with cords. In exceptional cases there is no string-holder (No. 11), or one consisting of a bridge-like, slightly rounded piece of wood, through which the strings and the fastening cords are threaded from opposite sides (No. 18, Fig. 25).

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[2] Sachs, op. cit., page 158.

Professor Sachs says that the modern string-holder can be traced back to the eleventh century.[3] Several other types occur in the Middle Ages, but the horizontal pin is apparently unknown. Professor Sachs does not seem to have known it except from the bowed-harp. It is obviously primitive, but might be taken to denote a second stage of development, before which the strings were fastened to the body of the instrument, and then No. 11 might be regarded as an older form in respect of this detail. On the other hand, if the strings are fastened to the instrument itself, there must be a bridge, at least when a bow is used. If the horizontal-pin string-holder is used, a bridge is not essential, and, in fact, the horizontal pin originally served as both string-holder and bridge.[4] It therefore need not necessarily belong to a second stage of development. Three of the bowed-harps which have cross-pins have certainly bridges as well, but all these bridges are of recent date, and seem to be later additions. There are no grounds for assuming that those instruments which lack bridges have lost them.

The latest evidence that the string-holder served at the same time as bridge is to be found in the two-holed Kerimäki harp (Fig. 25), where it is more or less bridge-shaped, but the strings are fastened to it and not stretched over it, which proves that it is more a string-holder than a bridge. Several of the older harps furnish similar evidence, namely, those which have no bridge, although they have a modern string-holder, which therefore served simultaneously the purpose of a bridge.

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[3] "Reallexikon," s.v. Saitenhalter.

[4] Cf. Retzius's description, page 59.

The *bridge* appears comparatively late as an independent part. One of its earliest forms is probably that shown in No. 12 (Fig. 20), which is indeed one of the best proportioned and acoustically most perfect of the three-stringed harps.

The combination of string-holder and bridge is a very ancient feature, but the author has not found it mentioned in scientific musical literature. Rühlmann assumes that the oldest form of bridge was a square or oblong piece of wood which was thrust under the strings,[5] an assumption which seems to be open to doubt. Such a bridge may be observed in the Southern Slav gussla, but it there indicates a fairly advanced phase of development.

The *strings* are of spun horsehair, gut, or metal. Dr. Salminen's information (p. 64) leaves it doubtful which was the original material. The several horsehair strings are of different thicknesses, i.e., contain differing numbers of hairs. An attempt to count the hairs (instituted by Professor Lithberg) has not given any definite support for the assumption that fixed rules were followed in determining the number in each string.

The strings are stretched freely between the string-holder and the *pegs*, without any nut. The pegs are posterior, inserted from the back of the instrument, and about 7 cm. long. The string is inserted in the front end, which is cleft, and wound about 2 cm. from the actual hole. Thus they lie 2-3 cm. above the hand-hole, which greatly facilitates stopping. The pegs are a very primitive feature, both in form and in position, for a peg-board and posterior pegs are considered to be the most ancient arrangement.

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[5] Rühlmann, "Die Geschichte der Bogeninstrumente," page 134.

From the point of view of playing, the *bow* is the most essential part of the jouhikantele; it is the part which constitutes the bowed instrument. But it may also be regarded as a separate organism, the result of an independent process of evolution. For this reason it has been deemed best to exclude the bows from the list of instruments—especially as some of the harps have lost their bows, though originally they all had them—and consider them together in a separate group.

The following bows form the material to be studied:

1. Bow from the parish of Savonranta, Savolaks. Length, 50 cm. Stick curved and cleft at the head, where the horsehair (black) is fastened. At the other end the stick extends 10 cm. beyond the hair, forming a handle. Belongs to harp No. 16.

2. Bow from Suistamo, Carelia. Length, 44 cm. Resembles the foregoing in shape, but stick rather more curved. Belongs to harp No. 5.

3. Bow from Savonranta, Savolaks. Length, 47 cm. Resembles the foregoing, but handle shorter. Belongs to the two-holed No. 16. Cf. No. 1.

4. Bow from Carelia. Length, 42 cm. Stick straight, beginnings of head and nut, which are in one piece with the stick, and contain holes for fastening the hair. Hair black, hangs loose. Mus. No. 1855, 33.

5. Bow from Impilaks, Carelia. Length, 57 cm. Stick straight, with head and nut of same piece. Hair fixed in the projecting ends of the stick, beyond the head, in a hole, and beyond the nut by winding in a notch in the side. Belongs to harp No. 9.

6. Bow from same locality and of similar type. Length, 54 cm. Belongs to harp No. 14.

7. Bow from Eno, Carelia. Length, 65 cm. Stick straight, with head and nut in one piece. Hair loose, but seems to be threaded through the head and nut and fixed with nuts on the outside. Belongs to harp No. 6.

8. Bow from Kerimäki, Savolaks. Length, 66 cm. Stick straight, with head and nut in one piece. Hair white. Belongs to harp No. 18.

9. Bow from Carelia. Length, 59.5 cm. Stick straight, with head and nut in one piece. Hair white, fixed with metal buttons. Mus. No. 1855, 32.

10. Bow from Carelia. Length, 64.5 cm. Stick straight, with three notches in the back, opposite the nut, for tightening the hair. Nut of a separate piece, but missing, likewise the hair. Mus. No. 1855, 35.

11. Bow from Carelia. Length, 71.5 cm. Stick straight, with a hole near the middle. Opposite the nut (a separate piece) a notch for tightening the hair. Belongs to harp No. 3. Mus. No. 722.

12. Bow from Carelia. Length. 65.5 cm. Stick straight. Nut loose, and opposite to it a toothed piece of metal for tightening the hair. Head well developed. Hair missing. Mus. No. 1855, 34.

Thus there are two types of bows, those with curved and those with straight sticks. Nos. 1-3 belong to the former, 4-12 to the latter type. Another important feature is the method of fastening and tightening the hair. The curved stick is usually cleft at the head end, and notched in the side at the other. At the head, the hair is often

Fig. 26. (No. 1.) Fig. 27. (No. 4.) Fig. 28. (No. 5.) Fig. 29. (No. 7.) Fig. 30. (No. 8.) Fig. 31. (No. 9.) Fig. 32. (No. 10.) Fig. 33. (No. 11.) Fig. 34. (No. 12.)

Figs. 26-34. Harp bows in the National Museum, Helsingfors.

fastened simply by being knotted and placed in the cleft, or it may be wound round the end as well. At the hand end the hair is always wound round the stick, and either knotted or fixed in the notch.

The second type shows a number of different modes of construction and methods of fastening the hair. The most

primitive form has only the beginnings of a head and nut, which gradually develop. Finally the nut is detached from the stick and made in a separate piece, as in the violin bow, when a primitive method of tightening comes into use. A loop of string or wire then runs through the nut and is fastened to a hook on the back of the stick. The hair is at first fastened to holes in the head and nut. Later it is carried over the head and nut, and fastened with a knot at one end and wound round the stick at the other No. 5), or else threaded through holes in the head and nut (No. 7), and finally fixed with metal or wooden wedges.

Thus the Finnish material ranges over the whole evolution of the bow—the screwed nut only is missing—as it is known from both European and extra-European sources. Here is the curved bow, the origin of which is still a matter of discussion, as mentioned on another page (Chapter I), but which was the predominant type throughout the Middle Ages. Here, too, are the next following phases, the beginning of head and nut, which appear in the fifteenth century, and the toothed piece of metal which was applied to the back of the stick in the latter half of the seventeenth, when the nut became a separate piece.[6]

In the most primitive bows the hair is loose, and is tightened by the fingers in playing. Whether this method is specially characteristic of the bowed-harp the author has not been able to decide with certainty.[7] Rühlmann

[6] Sachs, "Reallexikon," s.v. Bogen.

[7] Schlosser calls it "the primitive method of tightening, which is in use all over the east." "Unsere, M. I.," page 14. The hair is similarly tightened in playing the nyckelharpa. (Similar bows are in use in Egypt at present day. Editor possesses one.)

mentions that "the finger or a little bit of wood can be inserted" in the lower end of the primitive bow to keep the hair tight. Spruce rosin was used to increase the friction of the bow on the strings, and, as we have seen, is mentioned as early as Juslenius.[8] The rosin was fastened —possibly by melting—in the angle formed against the resonating body under the finger-piece. When the player wished to rosin his bow, he turned the harp upside down and drew the bow backwards and forwards over this part. In Tavastland the rosin for violin bows was in former days also fixed under the neck of the violin, against the upper end of the body.[9]

Putting together the evidence of folk-songs, early research, and the ethnographical material, we find that the distribution of the bowed-harp in Finland is comparatively restricted. The map (Fig. 94) shows that the area within which it has certainly been observed extends from Mäntyharju in the west to Suur-Mägi in the east, from Hiitola in the south, to Eno in the north. If Porthan's information was derived from Viitasaari, the area is enlarged towards the north-west, and its extension to Viitasaari would seem probable, as there are several notices of the instrument from east Savolaks. Moreover, those variants of the lay about the origin of the kantele which can be interpreted as referring to the bowed-harp—apart from the Esthonian variants—come either from that same district or from the most easterly and northerly sources of the lays, Olonets and Russian Carelia. The

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[8] Cf. page 46.

[9] Verbal statement by Drum Major Järnefelt, Lahtis.

clearest references to the bowed-harp are in the variants from furthest north. These expressly mention the bow.

The bowed-harp seems to have been most general on the north coast of Lake Ladoga, near Sordavala. All statements agree that here it was formerly more widespread than might be thought from the specimens preserved. It was in these regions that Julius Krohn localised the lay about the origin of the pike-bone kantele.[10] He considered it to be a later form than the Esthonian, in which the kantele is made of wood, but this view has probably no longer any adherents.

It is not probable that the narrow-holed bowed-harp originated in this district, in spite of the frequency with which it occurred and the fact that only one instance of this type is known from any other region, namely, from Sweden. But putting aside this possibility, there is still the question how the bowed-harp came to Carelia, and this will be considered in the next chapter. Here we need only remark that the plucked kantele seems to have entered Finland from the east and south-east, and is most nearly comparable with the musical instruments found among the Baltic peoples, who are related to the Finns, and among the Russians. The Russian national instrument, *gusli*, belongs to the same type, and has been regarded by some students as the precursor of the plucked kantele.[11] But the sources for the history of the bowed kantele flow from the west. For this type the nearest points of contact are among the Swedes of Esthonia.

The age of the bowed-harp as compared with the

[10] Krohn, "Suom. Kirjall. Hist.," page 460.
[11] Famintsin, Gusli, s. 66 f.

plucked kantele forms another central problem. Without being acquainted with the whole of the material, a number of investigators have regarded the bowed-harp as the oldest and most important of the Finnish musical instruments. When Gottlund launched this theory it seemed bold, and gained little recognition, but it was recognised later by both Europæus and Poppius. The bowed-harp seems to be the more primitive of the two. The material of the strings, their number, the nail technique, the cross-pin, string-holder, tailboard, and pegs, form together incontrovertible evidence of great age.

The question which of the two kantele instruments is the older among the Finns can hardly be finally decided without a thorough knowledge of the history of the plucked kantele, which is outside the scope of the present work.[12] At the present state of research, and in view of the results produced by a study of the bowed-harp in Finland, the author is of opinion that the latter is the older instrument. This assumption is not shaken by the conclusions reached by modern students as to the relative age of the plucking and the bow technique, even though it is still unsettled which of the two can be traced furthest back in time. Professor Sachs has shown that the question of the bow is not a chronological but an ethnological one. As applied to the relative position of the two stringed instruments of the Finns, Professor Sachs's view gives good support to the theory here put forward.

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[12] Mr. A. O. Väisänen announces a work on the plucked kantele.

Chapter IV.

THE BOWED-HARP IN SWEDISH ESTHONIA AND HOW IT CAME THERE.

THE bowed-harp was formerly widespread among the Swedish population which inhabits part of the west coast of Esthonia and some of the islands on that coast. According to the historical authorities, these Swedes settled in Esthonia not later than the thirteenth century, and probably as early as the days of the Vikings.[1] In these little settlements, and especially in the islands of Ormsö, Nuckö and Dagö, they have preserved an advanced type of bowed-harp, with a wide, often square, hand-hole, and three or four strings. In Ormsö it is called *talharpa*, *tallharpa*, or simply *harpa*, and is regarded by the population as their national instrument. The author has been told that there used to be a harp in nearly every home. It was almost a part of a man's education to be able to play, "förstå att slå på," in the idiom of the locality. He who could not do so was regarded as hardly a man.

A number of investigators and archæologists have observed this instrument in Swedish Esthonia. The first ac-

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[1] Cf. Russwurm, "Eibofolke," I, page 31 ff., and Danell, "Svenskarna i Estland," Rig. 1922, page 2.

count of it is given by C. Russwurm, who describes it as follows: "The pine harp, tal-harpa, from *tall*, pine, or horsehair harp, from *tagel*, horsehair, contracted to *tál* in combination. The strings, namely, were sometimes made of spun horsehair, as children still make them to this day. This harp is rather like the Esthonian kannel, a long-shaped, rectangular instrument of pine wood with four violin strings tuned in fifths, played with an exceedingly primitive bow, the strings being stopped to the required notes by touching them with the fingers. It is commonest at Ormsö (Worms, in Esthonia), and among the Swedes in Dagö, and is also known to the Esthonians under the name of rootsikandel."[2] Some points in Russwurm's account are made clearer by the description sent to the Finnish Literary Society in 1857 by G. Fr. von Böhning, Consul in Reval, with a specimen which he presented to the Society.[3] Böhning writes: "*talharpa*, which probably comes from *tagel* (horsehair), of which the strings were made." He says expressly that the strings are touched with the back of the fingers of the left hand, and finally adds that every peasant in Ormsö had skill and practice in playing on this simple but yet tuneful instrument, a statement which is also confirmed by Russwurm.[4]

Without any previous knowledge of these statements, the author made the acquaintance of the talharpa when visiting Ormsö in 1903 in order to record folk melodies. His attention was attracted by the instrument, which appeared to represent a type previously unknown to musical re-

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[2] Russwurm, "Eibofolke," II, page 118.

[3] Archives of the Finnish Literary Society.

[4] Russwurm, op. cit. II, page 81.

search. Unfortunately, specimens were few and far between. A religious revival[5] led by the Evangelical *Fosterlandsstiftelse* of Stockholm, which seems to have begun in the eighteen-seventies, had dealt harshly with music and musical instruments. The talharps had been collected together and burnt, as being tools of the devil. At the time of the author's visit the minds of many were still bound by the chains of religious fanaticism. One old harper on being asked to play declaimed in reply: "The time when I saw Jesus will never leave my mind," whereupon he turned and went his way. In another farm the old player said nothing, but would not consent to perform; finally his wife volunteered the information that her husband "only played to the honour of the Lord."

Luckily one good representative of the old harp-players still remained. Hans Renqvist had not taken part in the religious extravagances, but had saved his harp and preserved the memory of the old melodies. He could tell about the position which the talharpa had formerly held in the lives of the Ormsö people, and his statements agree with those of Russwurm and Böhning quoted above. The talharpa was, above all, a necessity at weddings. In spite of the monotony of its melodies, it kept the merriment alive all night long. Different persons played it in turn, or, in other words, no special professional musician was engaged, this being possible as skill on the harp was a general accomplishment.

Renqvist was no virtuoso, but a capable performer on his instrument (described on p. 123), and he had every qualification for initiating his auditors into its peculiar tech-

[5] Danell, "Svenskarna i Estland," op. cit., page 20.

nique, the resources of its tones, and its characteristic melodies. He stopped the strings with his nails or the hardened back of his fingers, which touched the strings obliquely from below, and he did not seem to find this backhanded method of playing in the least awkward. As easily as a violinist stops the strings by pressing them

Fig. 35. Hans Renqvist, with instrument from Ormsö. (Description No. 5, p. 123.)

Fig. 36. Anders Vaksam, with instrument from Ormsö. (Description No. 7, p. 124.)

against the finger-board with his finger-tips, Renqvist stopped them by lifting his fingers, not to press the string against anything hard, but to touch it lightly—only a little more firmly than a string is touched in playing harmonics on a violin. Professor Hornbostel, who has noted a similar technique on the *ch' ao- t' ien-tzë*, observes that each pressure not only shortens the string but also at the

same time stretches it, and he adds that a European would not consider the music so made strictly in tune.[6] The stretching of the string and the resulting change in pitch naturally depend on the amount of pressure used. The author feels bound to state that Renqvist's playing was irreproachable in this respect. Peasant violin players are often less in tune. This was because his fingers touched the strings lightly and with even pressure. And the skill seems to lie mostly in this method of playing, and Renqvist was equally admirable for his easy finger technique and for his soft stopping.

The way in which the strings were stopped gave the tone a peculiar quality; it had a soft and gentle effect, somewhat recalling the violin *con sordino.* Only two strings were used for the melody, while the two lower ones served as bourdons. Owing to the looseness of the hair on the bow and the flatness of the bridge the bourdons always sounded at the same time, giving a rather full, harmonious undertone to the melody; the number of tones made up for their weakness. Otherwise no great beauty of tone could be expected from Renqvist's old harp, though the author received a definite impression that a well-made instrument of this type would sound excellently.

In order to illustrate the form, melody, and compass of the tunes played, three of those in the author's collection are given below. The author was informed that the first and third of these were indispensable items at every wedding, while the second one is a dance tune of the type most usual in Ormsö.

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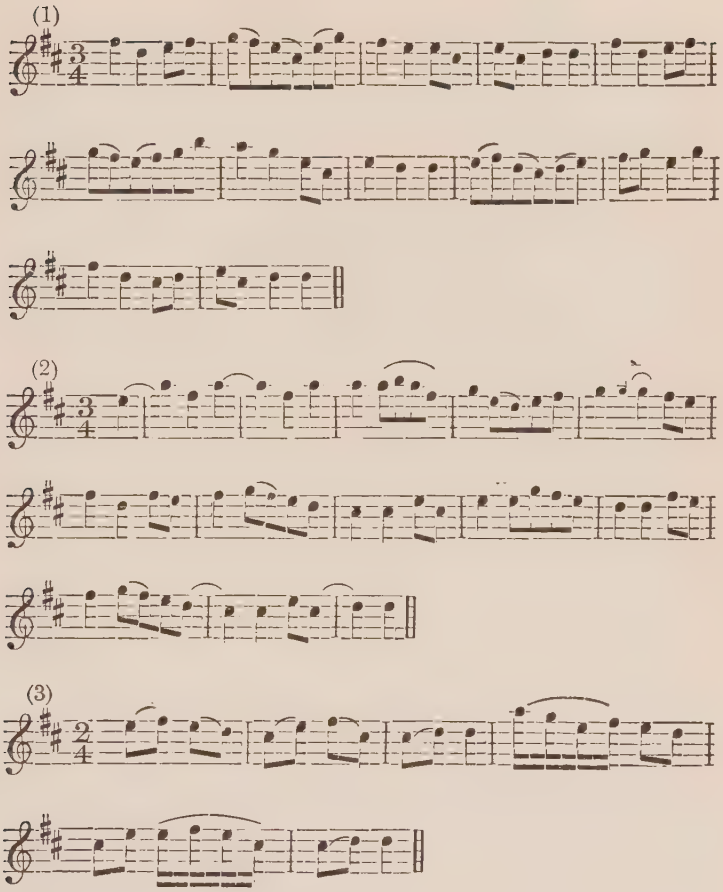
[6] "Archiv. für Musikwissenschaft," I, page 492.



It was while the author was staying at Ormsö parsonage that he first met Renqvist. Later he went to the old musician's home, and saw there a harp of a different form, with a violin body and the talharpa's finger-piece. Renqvist had seen a violin once when visiting Finland, and thought its resonating body better than that of the

talharpa, so on his return home he had made himself this instrument, the tone of which was certainly rather firmer than that of the old harp.

A harp of similar hybrid form, the property of Mr. John Berggren, a teacher, is still in existence in Ormsö. He obtained the instrument from the school children, who had rescued it from a rubbish heap. Mr. Berggren calls it "quite a new type." He has furnished valuable information which confirms and, moreover, supplements what had previously been recorded about the shape of the harp and the way it was played in the old "harping time."[7] At weddings the harp was the favourite instrument. Here, at the greatest ceremonies in life, it had been from ancient times the source of merriment, and led the dance and song. But after Christmas, too, when all weddings were over and the "lean season" supervened, the harps still sounded in the cottages. Mr. Berggren's grandfather used to say that "the fish barrel, the ale barrel, and the talharpa were the peasant's comfort in the winter." The harp was also in request at the young people's summer festivals in the forest and the meadows. In alehouses, too, harp-players were often to be met with, but there they would not play for less than a glass of spirits, which otherwise cost a kopek and a half.

Mr. Berggren's grandmother (now aged seventy-five) has given the following particulars: "The harp was holy. There were few good harp players. Johan Appelblom

[7] Mr. Berggren replied to an advertisement asking for information about the talharpa which the author inserted in "Kustbon," No. 7, 1922. Since then he has industriously sought out old harps and players, and been good enough to communicate from time to time the information he has managed to collect.

could draw from it melodies so melancholy that his hearers' eyes grew moist. Such players were held to be divinely gifted." Mr. Berggren mentions as good harp players Johan Laus and Hans Ek. The latter was a little mad, and went from farm to farm with his harp, playing generally his two "stock pieces," one called "The Lovely" and the other "The Fiery." Once the peasants in Norrby tied him up so that he could not play his harp, but he escaped from his guards. When he was caught and brought into a cottage, he broke his harp to pieces in anger. After sitting a while with the bits of the broken harp in his hands, he is said to have remarked: "I can send the frame to the big house for a cheese mould."[8]

Nowadays, according to Mr. Berggren, the "harping time" is past in Ormsö. One or two old harp players are left, but their harps have been lost long ago. The old player, Anders Vaksam, photographed for this work (Fig. 36), has no harp now, but is shown with that preserved by Mr. Berggren, which is the only instrument of its type now known in Ormsö.

It was in Helsingfors that the existence of the talharpa in Dagö was first brought to the notice of the author, who accidentally met in the spring of 1908 a wandering Dagö musician, Georg Bruus. He had come over on some Esthonian smack, and at the moment was stopping in the harbour, always ready to play for a copper on his harp, which was mostly regarded as a curiosity. Bruus was born of Swedish parents, although he was one of those who have forgotten their mother tongue—it is well known

[8] This expression suggests that the resonating body was made with ribs and back.

that the little Swedish colony in Dagö has been completely absorbed by the Esthonian population. That his instrument, and, to some extent at least his melodies, also represented old Swedish traditions in Dagö is proved not only by his own origin, but also by the fact that his teacher, the almost centenarian sexton of the Lutheran church, had come from "the Swedish village," a Swedish man, born of Swedish parents.

Fig. 37. George Bruus, with instrument from Dagö. (Description No. 8, p. 124.)

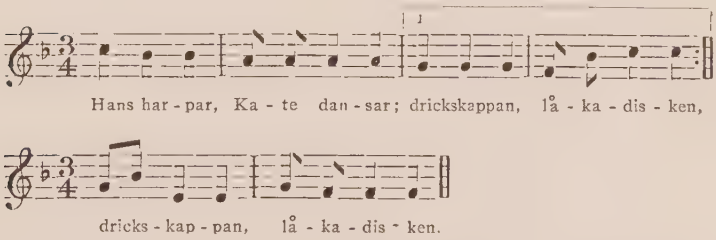
Bruus's *eestikannel* was a bowed-harp of the same type as the talharpa, although with substantial differences in detail. The resonating body was not hollowed out of a single piece of wood, but made with sides, back and soundboard. The sides projected and formed slender arms, which were united by a slightly curved yoke extend-

ing a little beyond them. There were four violin strings tuned in fifths, three of them of steel and the fourth spun.

In playing, Bruus put his right knee over his left and rested his harp upon it. This was possibly because he was lame (the right leg shorter than the left), so that if he had held his harp in the same way as Renqvist, its position would have been too vertical. In any case, the result was that it seemed practically to be lying loose in his lap, and he could give it but slight support with his left hand, as he used that to stop the strings. But the difficulty, though obvious, seemed to have no effect on his playing. He handled his instrument with real virtuosity.

The second known bowed-harp from Dagö resembles the above in detail. One is therefore justified in drawing the conclusion that both are fruits of the same tradition, which in all probability goes back to the Swedish colonisation of the island, and must be of great age.

The bowed-harp seldom occurs in the Swedish Esthonian folk poetry. The author recorded in Ormsö an old melody which was called *harplaikin*, and has recently received from Mr. Berggren a somewhat different form of this *laik*, accompanied by a couplet in which the word "harp" occurs:



(Hans harps, Kate dances.) Mr. Berggren calls this "the

harp tune." A similar trace of the harp is to be found in another couplet recorded by the author:

> Så som jag rätt tänker hur Jonas Hans harpa.
> (As I think rightly how Jonas Hans harped.)

The remarkable thing is that in both these cases the word is used as a verb; the player is also often called "harper." There is here a significant analogy with the usage of a number of Teutonic languages. "To harp" is often used in the sense of "to play a stringed instrument."[9] A Danish proverb says "A bad harper always scrapes the same old string,"[10] and in English there is a similar expression.[11]

The harp and harp-playing form the pith of the old legend of the Bussby wedding, "which was the cause of the reprobation of the harp." Mr. Berggren has recorded the story in the following form: "One year there were at Bussby fifteen weddings all at once, which were celebrated with such pomp and feasting that there was no end or limit to the dancing and playing, drinking and eating. All the people in the village drank so much that they could not be content to stay in their homes, but danced out upon the fields and meadows, drunk with wine and tallharpa playing. At that time a big boat

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[9] Miss Panum quotes several examples in "Middelalderens Strengeinstrumenter," page 110 f. For others, cf. Kalkar, "Ordbog til det aeldre danske sprog," s.v. Harpe.

[10] Peder, Syv., "Ordsprog," I, page 373.

[11] In Brit. Museum MS., Cotton Vesp. A.I., a Latin Psalter (700 A.D.) in the Gallican version of St. Jerome, there is an Anglo-Saxon interlinear translation of the Psalms in which *psalterium* is rendered HEARPAN, from the Anglo-Saxon *harpan*, to pluck. (Editor.)

anchored below Bussby, and from the boat a man, tall and handsome, came up to the Bussby folk. But this man despised the playing, so he wrung the musician's neck, and took his harp, and began to play himself. He played with such skill that all the merrymakers leaped and writhed in a wild intoxication of joy. As he played, the skipper went down to the sea and all the merrymakers followed him, went on board the boat, and disappeared for ever." The informant adds that the player is supposed to have been Satan himself.

This story belongs to the group of legends which tell of the water spirit appearing at dances, playing, and forcing all to follow him. The legend occurs in Sweden, Finland, and also in Esthonia. The variant here quoted most nearly resembles a legend known from several sources of a dance on the Hårga mountain in Helsingland.[12] The instrument is a violin in most of the variants in which it is named, but obviously this must have been introduced into the legend in comparatively recent times. The connection with harp playing gives additional interest to the Ormsö variant.

In Swedish Esthonia, as in Finland, the most important source of information about the harp is the ethnographical material—including Bruus's instrument, which demonstrably belongs to a district where Swedish was formerly spoken, and an instrument of the same type from Dagö which is now in the Esthonian Folk Museum (Eesti rahva museum) in Dorpat. Nine specimens have been preserved in all, three of them in the Nordisk Museum, Stockholm, one in the National Museum, Helsingfors, one in the Es-

[12] Cf. Norlind, "Studier i Svensk folklore," page 121 f.

thonian Folk Museum, one in the Psychological Institute of Berlin University, one belonging to Mr. John Berggren, and two the property of the author. The following catalogue is partly compiled from the instruments themselves, and partly from information kindly furnished by the owners and museum officials.[13] It does not include the features common to all the specimens, which are as follows: oblong shape, resonating body hollowed out or made of several pieces, with soundboard; hand-hole formed by two arms protruding from the sides and connected by the yoke, which is either in one piece with the back and arms or a separate piece set on; posterior pegs, bridge, stringholder and bow.

Instruments from Swedish Esthonia.

1. "*Tallharpa*," from Nuckö. Length, 53 cm., breadth, 15.5 cm., depth, 6.5 cm. Pine body with trough-shaped back. Pine soundboard fastened with nails. Three soundholes, two crescent-shaped and back to back, the third a slit terminating in a round hole at the upper end. Birch yoke added. Three horsehair strings, one string and its peg missing (I, 18, II, 21 hairs). Secured by Mr. Hans Pöhl, school teacher in Nuckö, who stated that it was about one hundred and fifty years old. Nord. Mus. Cat. No. 104366 (Fig. 38).

2. "*Tallharpa*," probably from Ormsö. Length, 44.5 c.m. Breadth, 14.7 cm. (tapering slightly towards the

[13] Information has been furnished by the following: Prof. Nils Lithberg and Dr. Sune Ambrosiani, Nordisk Museum, Dr. O. Kallas, Dorpat, and Prof. A. M. Tallgren, Helsingfors, and Mr. John Berggren, Ormsö.

bottom), depth, 5 cm. Birch body, flat back. Spruce soundboard glued on, with two *f*-shaped soundholes and one cross-shaped. Under the middle of the soundboard there is a strip of wood extending from rib to rib. Peg piece made separately. Four horsehair strings (I, 15, II, 22, III, 28, IV, 33 hairs). Secured through C. Russwurm in Reval in 1874. Nord Mus. Cat. No. 4817 (Fig. 39).

3. "*Tallharpa*," Ormsö. Length, 55 cm., breadth, 15 cm., depth, 6 cm. Pine body, flat back. The whole instrument except the soundboard is of one piece and reddish in colour, "smoked." Birch string-holder. Hardwood pegs. Four horsehair strings, one missing. Presented by Consul G. F. Böhning (a note in the chief register of the Historical Museum says "Hildebrand i Reval, 1837").

4. "*Talharpa*," Ormsö. Length, 54 cm., breadth, 16 cm. (slightly tapering towards the bottom), depth, 5 cm.

5. "*Talharpa*," Ormsö. Length, 52 cm., breadth, 14 cm., depth, 6 cm. Birch resonating body and soundboard. The latter fastened with nails and pierced by *f*-shaped soundholes. Four violin strings tuned in fifths. Sent to the Finnish Literary Society in 1857 by J. Fr. Böhning, and presented by the Society in 1868 to the Ethnographical Museum. Nat. Mus. Cat. No. 734 (Fig. 41). (= No. 3, p. 135 in Swedish Edition.)

6. "*Talharpa*," Ormsö. Length, 54 cm., breadth, 16 cm. (slightly tapering towards the bottom), depth, 5 cm. Pine body. Soundboard fastened with nails and pierced by two cross-shaped soundholes, one above and one below the bridge. Four violin strings tuned in fifths. Belonged

to Hans Renqvist. Bought by Otto Andersson in 1903 and presented to the Psychological Institute of Berlin University in 1909 (Fig. 35). (= No. 4, p. 135, in Swedish Edition, and Fig. 34, p. 128.)

7. "*Talharpa*," Ormsö. Length, 52 cm., breadth, 18 cm. at lower end, 16 cm. at upper end, depth, 4 cm. Body similar to that of a violin. Birch back, ribs, arms and yoke, spruce soundboard. Four violin strings, tuned in fifths. A hybrid instrument made by Hans Renqvist after he had seen a violin in Finland. Bought by Otto Andersson, the present owner, in 1903.

8. "*Talharpa*," Ormsö. Length, 57 cm., breadth, 19 cm., depth, 7 cm. Violin-like body, back, ribs, arms, and yoke, probably of alder. Four violin strings tuned in fifths. Hybrid form, black and dirty from age. A piece missing beside the crescent-shaped soundhole on the right side. The property of Mr. John Berggren, Ormsö (Fig. 36).

9. "*Estikannel*," Dagö. Length, 52 cm., breadth, 22 cm., depth, 6 cm. Spruce body, oak peg piece. Two soundholes in the shape of reversed *f*s. Four metal violin strings. Made by Georg Bruus, who got the model from his teacher, the "sexton of the Lutheran church," a Swedish-speaking man who died in 1894, aged nearly a hundred. Bought in 1908 by Otto Andersson, the present owner. (Fig. 37.)

10. "*Kannel*," Dagö, parish of Pühalep. Dimensions not given, probably like the foregoing. Made about 1897 by Andres Särglep, who presented it to the Esthonian Folk Museum. Mus. Cat. No. 5669.

Fig. 38. (No. 1.)
From Nuckö.

Fig. 39. (No. 2.)
From Ormsö.

Fig. 40. (No. 3.)

Fig. 41. (No. 4.)
From Ormsö.

Fig. 42. (No. 9.)
From Dagö.

Fig. 43. (No. 6.)
From Dagö.

Figs. 38-43. Swedish wide-holed bowed-harps from Nuckö, Ormsö and Dagö.

The harp shown in the frontispiece[14] may be added to this list. It resembles No. 2, except for the latter's cross-shaped soundhole, which is not shown in the picture.

The eight instruments of which the wood is known are four of birch and alder, three of pine, and one of spruce, and these woods are also used for the soundboards. The material is too scanty to allow any conclusions to be drawn from this detail, but the fact that hardwoods are sometimes used seems to confirm the view that the name *talharpa* or *tallharpa* was probably not derived from *tall*, "pine," although this explanation has been given. The derivation from *tagel*, "horsehair," is obviously right.

The dimensions are fairly constant. The length varies between 44.5 and 55 cm., the breadth between 15.5 and 22 cm., and the depth between 4 and 6 cm. There is not much difference between these measurements and the average dimensions of the narrow-holes bowed-harp.

A notable advance in the construction of the *resonating body* can be seen in the specimens from Swedish Esthonia, which range from the Nuckö instrument with its rounded, trough-shaped back to the two Dagö ones with their back, ribs and soundboard. Even in the first of these the resonating body occupies more than two-thirds of the total length, indicating an attempt to obtain as rich a tone as possible. The Ormsö harps have flat backs and are slenderly made, but their dimensions are not so good from an acoustic point of view. The Dagö harps are differently constructed from the others, and may be said to consist of a frame—rather than ribs—to which back and

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[14] From "Trachten der Schweden an den Küsten Ehstlands und auf Runö," Gezeichnet von H. Schlichtling, Leipzig, 1854, IV.

soundboard are affixed. Whereas in the other examples the soundboard is mortised in at the two ends, in those from Dagö it overlaps all four sides of the body and even curves slightly upwards in the middle; the rounding of the back has been transferred to the soundboard.

The *hand-hole* is roughly square; in the Dagö instruments the width is greater than the length. The increased width is clearly due to a desire to enlarge the resonating body, but there is no sign of any tendency to increase the length in order to render possible any sort of stopping by shifts. The upper end of the hand-hole is bounded by the yoke. This is sometimes in one piece with the arms (and occasionally with the back), in which case the hole has been carved out of the solid wood, and sometimes consists of a separate piece which has been fitted on and often extends beyond the arms at each side. It is difficult to deduce from the examples any evidence as to which of these methods is the original. The added yoke occurs in the three-stringed, trough-shaped Nuckö harp, but also in one from Ormsö and both of those from Dagö. Moreover, in the case of the last-named, it is of a different wood and slightly arched. It would seem, however that although the carved out hand-hole is found on talharps which are otherwise highly developed, a comparison with the hand-hole of the narrow-holed bowed-harp goes to prove that this is the older form.

The different shapes of the resonating body may be referable to localised variants. In Nuckö the trough-shaped and in Ormsö the flat back was preferred. In Dagö it became customary to build up the whole instrument from separate pieces, and here the slenderness of the arms, in other words, the exceedingly small amount of

wood in the finger-piece, is very striking. Probably, however, one will not err in regarding the different forms as marking different stages of evolution, although it would perhaps be rash to draw any conclusions from the date ascribed to the Nuckö harp and assert, for example, that its form is one hundred and fifty years earlier than that of the Dagö instruments.

The development of the resonating body at the expense of the parts above and below it has not only led to the elimination of all unnecessary wood from the finger-piece, but also greatly influenced the shape of the tailboard, which has really ceased to exist, and given place to a button or something comparable thereto. The specimens from Swedish Esthonia throw but little light on the history of this part. We need only note that a series of more or less successful experiments, beginning from the Nuckö harp, resulted in a fully developed button on the Dagö instrument in Dorpat.

Much the same is the case with the string-holder, bridge and pegs. The *string-holder* is of the usual truncated wedge shape, and the method of fastening it to the button varies from a little knob to two holes.

There is little to say about the *bridge.* It is only very slghtly arched, so that it is impossible to apply the bow to one string at a time. The *pegs* are posterior, cut flat at the hinder end, and cleft to hold the string.

The *strings* are of spun horsehair, gut, or metal, and are three or four in number. Progress is here perceptible, for the Nuckö harp and the oldest Ormsö examples have strings of horsehair, while the Dagö harp most recently discovered, the property of the author, has steel violin

strings. In all cases where the tuning of the wide-holed bowed-harp is known, the strings are tuned in fifths.

The *bows* which have been preserved are either of the primitive type with curved stick, or have a straight stick and separate nut. The loose hair is a characteristic feature. Both Renqvist and Bruus tightened it with three fingers when playing, only resting the first finger on the stick.

The wide hand-hole makes it possible to stop all the strings, but it is nevertheless certain that only the two right-hand ones were used to play the melody. In this respect tradition is supported by the shape of the bridge, the loose hair on the bow, and, above all, by the melodies, the compass of which is only such that all its tones can be produced on these two strings.[15]

* * *

A comparison of the Finnish and the Swedish Esthonian bowed-harps shows how much they have in common. The hollowed resonating body does not prove much in itself, for this is found in a large number of primitive instruments. Neither is there anything remarkable in the use of horsehair strings and a primitive type of bow. But the sum of these features, together with the peculiar technique, and—a necessary accompaniment thereof—the hand-hole, the most important detail in the harp's construction, prove a definite connection. These instruments are all *bowed-harps*; they form, as has already been shown

[15] The melodies give the clearest idea of the bowed-harp as a musical instrument, but for several reasons the author finds himself obliged to reserve the treatment of this material for another work.

in the typological summary, an independent, sharply differentiated group, within which the various specimens from different language areas mark successive stages of development.

The gradual evolution of the resonator, strings, string-holder and button of the narrow-holed bowed-harp has already been described. The talharpa may almost be regarded as a direct continuation, though it is true that it does not begin where the *jouhikantele* ends, but a little earlier. No instrument with an indentation opposite the hand-hole or in the middle of the resonating body, such as is found in some narrow-holed bowed-harps, occurs in Swedish Esthonia, nor yet any with two hand-holes separated by a centre piece. Typologically, the immediate predecessors of the Nuckö harp are the Eno instruments in the Nordisk Museum. These have trough-shaped backs, three strings and comparatively wide hand-holes. In the Nuckö example, Fig. 38, the hand-hole has grown still wider and its two sides have developed into arms united by a yoke. But in any case a considerable period of time must have elapsed between these two forms, to judge from the shape of the hand-hole and of the string-holder. Intermediate forms can be imagined. One such would be trough-shaped back, square, carved out hand-hole and three strings. The author would almost assert as a fact that this form has existed. It is reflected in the four-stringed Ormsö harps.

The way the harp is held is also practically the same in Finland and in Swedish Esthonia. The talharpa is held resting on the left knee—nearly opposite the hand-hole—with its lower end supported against the right, i.e., in an almost horizontal position, less sloping than the jouhi-

kantele. Hans Renqvist's position may presumably be taken as normal, though naturally there are many variations. The Dagö musician, Fig. 37, for example, as already mentioned, crossed his left knee over the right and rested his harp upon it.

The question arises, how two peoples that otherwise have so little in common as the Finns and the Swedish Esthonians both came to possess this peculiar and very ancient harp as one of their most important musical instruments. At the first glance it seems most probable that one people received it from the other, even if neither can be regarded as its inventor. Since the jouhikantele represents the earlier phase of development, it may seem natural to suppose that the Swedes of Esthonia borrowed the primitive type from the Finns and then developed it. But in saying that the sources for the study of the jouhikantele flow from west to east, the author has already hinted at another opinion. He believes that the bowed-harp was borne upon the current that carried culture eastwards from the west, and left deposits which are noticeable in many spheres, not least in folk poetry. One can imagine many ways in which it could have been brought to Finland and Swedish Esthonia. One explanation would be that the primitive form came first, and then disappeared, while more advanced forms gradually grew up. On this theory the Swedes in Esthonia would at one time have possessed the narrow-holed bowed-harp, although its tracks have been covered by the wide-holed form, which, on the other hand, had not yet been evolved among the Finns when another instrument thrust the whole type into the shade. This may have been done by the five-stringed, plucked kantele.

This view seems to gain support from the few notices of the jouhikantele from Esthonia, and also from Russwurm's statement that the Esthonians knew the talharpa under the name of *rootsikandel*[16] (this word means "Swedish kantele"). It is remarkable that the earliest forms of the Finnish lay about the origin of the kantele were discovered on the west coast of Esthonia (Viljandimaa and Päärnunmaa). This fact becomes still stronger evidence if the connection between these lays and the jouhikantele is admitted. But the folk poetry of the Swedish Esthonians does not furnish a single piece of evidence in support of the theory. Here there seems to be no trace of any poem about the instrument's origin. Neither can much be learnt about the former relations between Esthonian and Finnish folk poetry on the one hand and Scandinavian on the other. Prof. K. Krohn believes that the lay about "The Ransomed" was introduced by the Swedish Esthonians.[17] It is difficult to be sure about this, as there is no evidence of the lay from Swedish Esthonia, but the absence of evidence is not proof in the negative, and these Swedes may well have been the bearers of culture from the west. The old culture of the Esthonian Swedes has been too little investigated, and there, as elsewhere, much has naturally been lost.

There is one remarkable circumstance which deserves notice. The folk poetry of Swedish Esthonia consists principally of quatrains; the folk song of the Middle Ages is surprisingly poorly represented. How is this to be explained? Prof. Steffen says that "contemporaneously

[16] Kreutzwald, Fr., "Lieder der Esthen," page 43.
[17] "Kantelettaren tutkimuksia," page 300.

with, or even previous to, the period of ballad poetry, Scandinavian soil produced a more purely lyric verse which may be concisely described as uni-strophic."[18] If this be so, we are justified in supposing that the Swedes brought their uni-strophic poetry to Esthonia from their mother country when they migrated thither. Whether they also took the talharpa with them is a separate question, but one that may be still more easily answered in the affirmative. It is true that under these circumstances it is difficult to explain the connection between the northern folk poetry and the instrument itself. But the Scandinavian lays about the harp may have been composed after the migration to Esthonia had taken place, and the borrowed material in the Finnish lays about the kantele and kantele playing may have come direct from Sweden. This would be the second explanation. Then the two forms of harp would both have arisen in Sweden itself, and been derived directly from that country, the one becoming characteristic of Finland and the other of Swedish Esthonia. On this hypothesis it is unnecessary to suppose that Swedish Esthonia acted as an intermediary, or to assume that the primitive form of harp ever existed there. The absence of any examples from the west of Finland militates against this theory, and so do the Esthonian references to the two-stringed jouhikantele, but the latter may be an importation from Finland into Esthonia. On the other hand, the theory gains support from the forms which occur in Scandinavia, and above all from an important prehistoric find discovered in Gothland.[19]

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[18] "Enstrofig nordisk folklyrik," page 148.

[19] Cf. page 174 f.

The theory that the bowed-harp came to Finland and Esthonia from the east must also be examined. When the present writer first discussed this instrument, in a lecture given before the Swedish Literary Society of Finland in 1904, he expressed the view that the type was Finno-Ugrian in origin.[20] This view was partly founded on the wide distribution of the instrument in Carelia, but was also partly due to an ignorance of any examples from Scandinavia or any western country, and was abandoned in the author's Vienna lecture. Dr. Tobias Norlind, however, reviewing the Hammarstedt festskrift "Översikt" in the Swedish "Journal of Musical Research," puts forward a view of the relation of the bowed-harp to other stringed instruments—partly based on Prof. Sachs—which he sums up as follows: "Thus while several analogies can be found between the bowed-harp and the instruments of the Slav peoples (and of the Finno-Ugrian Ostyaks in Asia), its connections with the west (Norway and countries to the south-west thereof) are very few."[1] Dr. Norlind seems to consider that they are confined to Mr. Galpin's Bangor instrument, which is mentioned.

It has hitherto been assumed, says Dr. Norlind, "that the bowed-harp is directly related to the round lyres." In this connection he refers to the fact that the Vienna lecture quoted a number of round lyre forms "which can be

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[20] S. L. S. Förhandlingar och uppsatser," 18, page 174.

[1] "Svensk tidskrift för musikforskning," 1922, page 120. The article is unfortunately marred by several errors and misprints. It is sufficient here to correct the statement that the present author and Juho Vaittinen discovered the two-holed type. The credit of this discovery belongs to Mr. A. O. Väisänen, as is expressly stated in the "Hammarstedt-festskrift," page 117 f.

regarded as nearly connected." He then continues: "But it would seem to be highly improbable that the northern instrument is really descended from the round lyre of western Europe." If Dr. Norlind thinks he is referring to any statement which the present writer has made about such a descent, he is mistaken. The author pointed out the similarity with the round lyres as suggesting quite a contrary evolution, from the bowed-harp to the round lyre, not vice versa, which can be understood from the Vienna lecture without difficulty.

It is odd that although Dr. Norlind accepts the theory that the narrow-holed type is the original form of bowed-harp, when he begins to look for analogies he adheres to the round lyre as the basic form. He first points to the features which the bowed-harp has in common with the ancient Teutonic warrior lyre and the Ostyak *nares-jux*. The former instrument will be considered in another connection. The *nares-jux* might be left out of the discussion, as the only feature common to it and the bowed-harp which Dr. Norlind mentions is the vaulted back, which is not confined to these two types But as Prof. Sachs also thinks it possible that the bowed-harp may be connected with the Ostyak instrument,[2] it may be well to study the relations between the two.

There are six *nares-jux* in the Helsingfors National Museum:[3]

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[2] Sachs, "Handbuch," page 159.

[3] A. Ahlqwist ("Ueber die Sprache d. Nord-Ostjaken," Helsingfors, 1880, page 107) gives the forms *naras*-playing, music; *naras-jux*, *narasta-jux* (music wood), a stringed instrument, Fidel. The museum catalogue calls No. 4 *pannaŋ-jux*, and No. 2 *saŋkultap*;

Catalogue Nos.	*Dimensions of the instruments in centimetres.*					
1. The property of Prof. U. T. Sirelius.	Length	125;	breadth	23;	depth	7½
2. Cat. No. 3904.798.	,,	111;	,,	20;	,,	5
3. Cat. No. 3904.797.	,,	111;	,,	23;	,,	4½
4. Cat. No. 3904.796.	,,	114;	,,	19;	,,	4
5. Cat. No. 1870.32.	,,	92;	,,	19½;	,,	5
6. Cat. No. 4934.113.	,,	101;	,,	18;	,,	5

The first five are from Ostyak territory. The sixth is from Samoyede territory, but is undoubtedly derived from the Ostyaks. Thus these instruments are fairly long, but narrower than an ordinary violin and about as deep.

The *nares-jux* are all made in much the same way. The resonating body is hollowed out of a single piece of wood, sembra or spruce. The back is almost flat. The soundboard, of spruce, is mortised in at the upper end, just above the fork, but otherwise covers the whole of the body, to which it is obviously fastened with glue. Both back and soundboard are made with much care, and remarkably thin. The lower end forms a pointed projection, through which a hole is pierced laterally. A twist of thread or gut is inserted through the hole and forms a loop, which serves as a string-holder. The strings, five in number, are of spun gut, and usually sized. They pass over the bridge (12-17 cm. wide and 2-4 cm. high), and at the upper end are fastened to the yoke, which is usually —and was probably originally—mortised into the front. The strings are tightened by wooden pins or little pieces

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it calls No. 6 "a musical instrument named *pôŋgôr*." Martin (according to Norlind, op. cit., page 113) calls these instruments *dombra*, with *narkas-jouchi* in parenthesis; cf. also Josef Papay, "Die ostjakischen heldenlieder Regulys," page 5, in the "Journal de la Société Finno-ougrienne," XXX, Helsingsfors, 1913-1918.

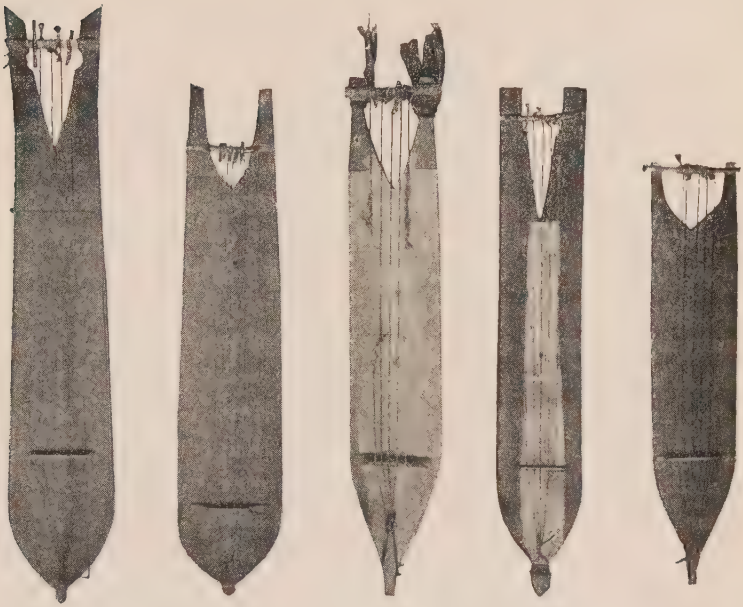

Fig. 44. (No. 1.) Fig. 45. (No. 2.) Fig. 46. (No. 3.) Fig. 47. (No. 4.) Fig. 48. (No. 5.)

Figs. 44-48. Ostyak *nares-jux* in the National Museum, Helsingfors.

of bone. In No. 2, one of the tuning pins is an elk's tooth, and it is expressly stated that sable bone is used in No. 4.[4] There seem to be no instances from Europe of this method of tightening, but it occurs in certain non-European instruments of the lyre type.[5] The forking of the back at the upper end is one of the most striking features in the appearance of the *nares-jux*, but its only real significance is for the primitive mode of tightening the strings. The player holds the instrument in his lap, and plucks the

[4] On one instrument shown by Dr. Norlind the strings are tightened by wooden screws.

[5] Cf. Sachs, "Handbuch," p. 126. Norlind, op. cit., p. 113.

strings with the right hand. The resonating body is filled with a quantity of small stones which rattle when the instrument is played.

Dr. Norlind has come to the surprising conclusion that "it is not a long step" from the *nares-jux* to the bowed-harp. Yet the only common feature which he has previously mentioned is the rounded back, and then he went on to say that there are too many points of difference for one to be able to assume that the Finno-Ugrian instrument is the prototype. The step is surely a very long one indeed, and if there is any connection between the two types of instrument, which is open to very grave doubt, there must have been a large number of links between them. The whole construction of the *nares-jux* is quite unlike that of the narrow-holed bowed-harp. In the first place, the former instrument is nearly twice as big, and its resonating body has attained a point of development scarcely reached even by the most advanced bowed-harps. The mode of tightening the strings is totally different. But, above all, the two instruments are played on utterly different technical principles. The bowed-harp is a bowed instrument, and seems always to have been so; the *nares-jux* is plucked, and the wedge-shaped opening under the yoke has nothing to do with the hand-hole of the bowed-harp.

Dr. Norlind finds other Eastern analogies for the tuning and the nail technique. The important agreement between the Carelian tuning observed by Mr. Väisänen and that of the Southern Slav *vijalo* has already been noted above. But Dr. Norlind obviously goes too far when he says that "this seems to have been the original tuning in all three-stringed instruments found on Slav

territory." The Polish *giga* and the Wendish *hussla* were tuned in fifths (D^1, A^1, E^2), and Dr. Norlind imagines the D^1 raised an octave to make it agree with the *vijalo* and the Carelian tuning, but this seems an excessively bold step. It is true that in a couple of cases the pegs are so placed as to make the middle string longer than the outer ones, but this is a very weak foundation on which to build. Moreover, it is still a matter of discussion whether the Carelian tuning is the original one on the narrow-holed bowed-harp, so that the analogy here suggested does not take one very far.

Dr. Norlind shares Prof. Sachs's view that the nail technique is to be regarded as "an ancient Slav and Western Asiatic custom." This view, which will be discussed more fully below, is partly based on Agricola's description of the Polish *giga*, and partly on an assumption that a similar technique was employed in playing the Southern Slav *gusla*. But the technique of the latter instrument has not yet been definitely determined. The author owns a specimen, and was expressly informed that on this one the strings were stopped in the usual way,[6] not, of course, by pressing them against a finger-board or anything of that nature, but simply by pressure against the string – though again, not by producing harmonics. This technique is fairly common on a number of Oriental instruments.[7] Apart from the technique, however, there is considerable difference between the *gusla* and the bowed-

[6] The author's instrument was a gift from the violinist, Viktor Novacek, who also furnished the above information.

[7] Cf. Von Hornbostel, E., Ch'ao-t'ien-tzě. "Arch. f. Musikwissenschaft," I, p. 492.

harp. The former has a neck and the latter a hand-hole. From a typological point of view they have no connection.

The technique which Agricola describes as employed in playing the Polish *giga* does seem on the surface to have borne some resemblance to the nail technique of the bowed-harp. But in all probability the Polish *giga* was an instrument of quite a different character. Prof. Sachs thinks of it as comparable to the Western European *rebec* or the Russian *gudok*, but he does not adopt any definite standpoint on the question.[8] He has in correspondence expressed the conjecture that the fingers may have been inserted from above between the strings, which, if they were fairly far apart, could thus be stopped with the nails—and demonstrated this theory on a Turkish fiedel.[9] But though this would be a nail technique, it would not be like that of the bowed-harp.

The author consulted Prof. A. Chybinski, of Lemberg, as to the existence of instruments related to the bowed-harp in districts to the east and south of Finland and Esthonia, or, in other words, on Slav territory, and the Professor has furnished some very valuable information. He writes as follows: "I have never seen in Poland, nor in any Polish museum, any instruments like those shown on the enclosed sheets (different bowed-harps). For historical and ethnographical reasons I am inclined to believe (but not convinced) that they are of west Asiatic origin, and more likely to be found in the east of Europe (Russia). . . . . I conjecture that they may possibly have been known in the east of Poland (east of Lublin, Lemberg, and north-east of Lublin), but unfortunately no traces of

[8] "Handbuch," p. 169.

[9] Letter to the author dated January 25, 1923.

them remain. I do not venture to decide whether the ancient Slav *gensl* (Polish *ges'l*) has anything to do with them. This instrument has in any case nothing to do with the Southern Slav *gusli*, and so far as I know (I have a good deal of information), these bowed zithers do not occur either in the Balkans or among other Southern Slavs. . . . . The Polish *geige* (giga) has not been preserved. In my opinion, based on comparative studies of the Polish folk instruments of the present day, it was certainly not a hand-hole instrument. Were hand-hole instruments known to the Western Slavs? I have long been puzzling over this question, but have found no tangible or even apparent evidence."

Prof. Chybinski's information contains definite facts. The bowed-harp has not been found in Poland, nor, so far as he is aware, in the Balkans, nor yet among other Southern Slavs. The Polish giga was not a hand-hole instrument. There is no tangible or even probable evidence for the occurrence of hand-hole instruments among the Western Slavs. This information only needs supplementing in a couple of points. Prof. Chybinski suggests (with reservation) a west Asiatic origin for the bowed-harp, and hints that it might be found in Russia. In this connection he conjectures that the catalogues of Russian museums might furnish the information required. But search has already been made in this quarter, and no trace of the bowed-harp has been discovered in any Russian literature on the history of musical instruments to which the author has had access.[10] Although the narrow-holed

[10] Massloff, "A List of Musical Instruments," Moscow, 1909. Privaloff, Gudoc, St. Petersburg, 1903. Famintsyn, Gusli, St. Petersburg, 1890.

bowed-harp was commoner in Carelia than anywhere else, only one example comes from the Russian side of the frontier. In the face of these facts it seems impossible to assume an Oriental origin.

Miss Panum shows an instrument (Fig. 49) from a Slav manuscript of the thirteenth century,[11] which in form somewhat resembles the wide-holed bowed-harp. But the illustration shows no bow, and in the absence of further knowledge of the manuscript in which it appears, this cannot be taken as definite evidence for the bowed-harp on Slav territory.

Fig. 49. Instrument from a Slav manuscript. From Panum, "Middelalderens Strengeinstrumenter," p. 88.

The various considerations detailed above thus lead the writer to a conclusion totally opposed to that of Dr. Norlind. The analogies suggested between the bowed-harp and the instruments of the Slav peoples (and of the Finno-Ugrian Ostyaks in Asia) are few in number and exceedingly vague. The next chapter will endeavour to show that the connections with the west are numerous and indisputable, and that the bowed-harp in all probability followed the clearly defined stream of influence from the North.

[11] "Middelalderens Strengeinstrumenter."

V.

THE BOWED-HARP AND ITS KINDRED IN SCANDINAVIA.

THE horns of the Bronze Age begin the musical history of Denmark "with a fanfare whose gallant and noble tones echo down to us from a long since vanished past," as Prof. Hammerich says,[1] but the Bohuslän rock carvings of the Bronze Age also give faint indications that the former inhabitants of Scandinavia had stringed instruments likewise.[2] Miss Panum believes that the carving here illustrated (Fig. 50) represents a stringed instrument, and the fact of one being shown in the rock carvings need not in itself be surprising, as horns are also shown.[3] Miss Panum is inclined to think that the instrument is a lyre, and she may be right, but the carving is unquestionably rather like a two-holed bowed-harp.

Fig. 50. Instrument in a rock carving. Bohuslän, p. 95, T.S.

Miss Panum says that the earliest written notice of a stringed instrument among the northern peoples is to be

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[1] Hammerich, "Dansk musikhistorie," p. 1 ff.

[2] Baltzer, Hällristningar från Bohuslän, pl. XI and XII.

[3] Hammerich, op. cit., p. 9 f.

found in the story of the Swedish chieftain who had a harp buried with him in his grave.[4] This story dates from about A.D. 900, and is derived from the Arab writer, Ibn Fadhlān. It refers to the "Russians" who used to sail down the Volga to trade with the Bolgars. Prof. Thomsen states on good grounds that "the people mentioned by Ibn Fadhlān cannot possibly be northeners who had come straight from Scandinavia to the Volga. They must undoubtedly have been living to the east of the sea for some time, and made themselves masters there. We must therefore look for the home of these "Russians" somewhere to the east or south-east of Lake Ladoga.[5] So the story referred to affords no certain evidence of the existence of the harp in Scandinavia, besides which, nothing whatever is known as to the nature of the instrument mentioned.

Musical instruments hold a definite place in the ancient northern poetry, the sagas and lays of the heroes. In the Poetic Edda the harp is the principal instrument. It is mentioned in "Voluspo" (first half of the tenth century)[6] in the following lines:

42. On a hill there sat
and smote [slo'] on his harp
Eggther the joyous
the giants' warder.[7]

The harp is only mentioned here, but the marvellous

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[4] "Middelalderens Strengeinstrumenter," p. 113.

[5] Thomsen, Vilhelm, "Ryska rikets grundläggning genom skandinaverna, övers. av Sven Söderberg, Stockholm, 1882, pp. 42, 46.

[6] Dates fixed by F. Jonsson, cf. Brate, "Sämund Edda," p. 267.

[7] English version of the Poetic Edda taken from Henry Adams Bellows's translation, New York, The American-Scandinavian Foundation, London, Humphrey Milford, 1923.

power of Gunnar's playing is celebrated in "Oddrúnargrátr," "Atlakviđa," and "Atla mol" (tenth or beginning of the eleventh century). In the last-named we read:

62. A harp Gunnar seized,
with his toes he smote [slo', slog] it
So well did he strike [slá]
that the women all wept
And the men when clear
they heard it, lamented;
Full noble was his song
the rafters burst asunder.

In "Oddrúnargrátr" we read how Gunnar played in the garden of snakes, so that the sound of his harp was heard as far off as Hlesey, whither Oddrun had gone to prepare a feast for King Geirmund:

28. Sudden I heard
from Hlesey clear
How in sorrow the strings
of the harp resounded.

According to the Volsunga Saga, Gunnar played so long that all the snakes went to sleep, except one big and fierce one, which crept up to him and stung him to the heart.[8]

The descriptions of Gunnar's playing give no indications as to what his instrument was like, so we do not know whether it was plucked or played with a bow. Neither has the author seen any explanation of the musical value of his playing with his toes.[9] One melody for

[8] Hammerich, op. cit., p. 14 f.

[9] If the strings were *struck* and Gunnar *smote with his toes*, can there be any doubt that the instrument was plucked? Gunnar could not bow with his toes. Cf. author's statement, T. S., pp. 102-3.—(Editor.)

Voluspo has been preserved, a simple melody on the tetrachord, F to B flat, with an added introductory note, which looks as though it might have been borrowed from the ancient Christian Church. Any instrument on which this melody was played must either have had a string for each note, or have been played by stopping the strings, which in this case would suggest a bowed instrument. All that is known of Gunnar's playing is that the tradition of it long survived, and gave its name to at least one piece of music, "Gunnarsslagir," which, with "Guðrunarbrögð," is the oldest named piece of music in the North (*c.* 1000 A.D.).[10] The most important point is that if the saga is to be regarded as historical, based on actual events, the music must have been of a very primitive character. But here, as in all other sagas which speak of the marvellous power of music, the original effect of the tones is supernatural; their principal element is not melodious, but magical.[11]

The harp occupies a more important position in the later sagas, and in many of those of the twelfth and thirteenth centuries it is mentioned together with other musical instruments in use at the time. Keyser, Miss Panum,[12] Dr. Norlind, and Prof. Hammerich have quoted most of the sources. The last-named also gives Saxo's remarks about the harp and harp players.[13]

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[10] Hammerich, op. cit., p. 20.

[11] Felber, "Die Musik in den Märchen und Mythen der verschiedenen Völker." Report of the Fourth Congress of the International Society, London, 1911, p. 177.

[12] "Nordevropas gamle Strengeinstrumenter," Aarsberetning fra 1903, p. 114.

[13] "Danmarks Musikhistorie," p. 18 f.

From the point of view of the history of musical instruments, the most important question is what the northern harp was like, and as to this the literary sources give either no indication at all, or very scanty ones. Keyser simply remarks that "the way in which the old Norwegian harp was made is not fully described."[14] Miss Panum says: "The only information which the lays give as to the construction of the ancient northern harp shows that it was a stringed instrument, and was played with the fingers."[15] She considers that more can be learned about it from the mediæval sources; it had a very large, long-shaped resonating body—big enough, it was said, to hold a full-grown man: "It is quite impossible that this should mean instruments of the lyre type," she says,[16] though this statement seems to be in conflict with her own account of "The Round Lyre on the Northern Monuments."[17] She there mentions the type of lyre shown in four different versions of the Gunnar saga, to which we shall return below. Dr. Norlind says that "one general name only was used for all stringed instruments, viz., the name 'harp,' which sometimes denoted instruments of the lyre type and sometimes harps. The lyre was probably the oldest of these. It seems to have been the only stringed instrument known in the North in the earliest times, and consequently was also the only one used in the home. The real harp is not indigenous in North European countries, and was not

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[14] Keyser, R., "Nordmaendenes Forlystelser i Oldtiden, Norsk Tidskrift for Videnskap og Litteratur," 1848, p. 249.

[15] "Middelalderens Strengeinstrumenter," p. 114.

[16] Panum, op. cit., p. 117.

[17] Op. cit., pp. 86-88.

originally known to the Teutons. It was introduced into the North through the Viking expeditions and intercourse with Ireland, and gradually came into use there, though it was still fairly rare in the eleventh century."[18] Professor Hammerich speaks more clearly, though he, too, thinks it uncertain whether the mediæval sources refer to the "real harp" or the "lyre-like crotta or rotta." He is accordingly cautious enough to take the two instruments, harp and crotta, together, and describe them under the common name "harpa."[19]

The question has not been by any means exhaustively discussed as yet, and a fresh scrutiny of the sources must be made in order to see what further light can be obtained. We may start with the assumption that both the "real harp" and the "lyre-like rotta" (to use these terms for the present) were known in the Scandinavian North before the twelfth century.

Various views have been expressed as to the origin of the "real harp." There is a definite difference between the Oriental harp and the European harp of the Middle Ages, for in the former the outermost and longest string lies open, while in the latter the two arms are joined by a pillar outside the strings, which are thus enclosed in a triangular frame. This difference has given rise to an hypothesis that the framed harp was of West European origin. Miss Panum put forward a theory that it was invented by the Celts and first became known on the British Isles, but Mr. Galpin demonstrated the untena-

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[18] "Svensk Musikhistorie," II ed., p. 10 f.

[19] "Dansk Musikhistorie undtil ca," 1700, p. 20.

bility of this view,[20] after which one might have expected the subject to be dropped. In her work mentioned (1915), however, Miss Panum adheres to her theory with even increased assurance,[1] though she does not refute Mr. Galpin's argument or adduce any fresh evidence. In his "Musiklexikon" (1916) Dr. Norlind supports Mr. Galpin's belief that the Celts were not the inventors of the harp, and says that nowadays there is practically only one opinion, viz., that this instrument was invented in Egypt and adopted in Europe by the Anglo-Saxons, who brought it to the east of England and Scotland, and that it passed thence into Ireland at the end of the tenth century. He agrees with Prof. Finnur Jónsson[2] that it only reached the north comparatively late, and was rare there until about 1200 A.D.[3]

Prof. Curt Sachs has gone deepest into the problem. He makes a keen scrutiny of the ancestors of the harp, and supposes the angular form to have arisen in western Asia about the second century before Christ. On the question of when and where it became a framed harp he takes a firm line, and categorically denies the assertion that no non-European harp has a "frontal pillar," i.e., can be described as a completely framed harp. He quotes three instances to the contrary, the *Ostyak toro (go) p-jux*, the ancient *trigonon*, and the Syrian harp of the early Middle Ages. Referring to Miss Panum, he points out

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[20] Report of the Fourth Congress of the I.M.S., 1911, London, 1912, p. 319 f.

[1] "Middelalderens Strengeinstrumenter," p. 106.

[2] "Das Harfenspiel des Nordens," Sammelbände d. I.M.G., IX.

[3] Dr. Norlind, "Allmänt Musiklexikon," 1916.

that the earliest mention of the harp in Europe is found among the Anglo-Saxons[4] in the eighth century, and among the Irish about A.D. 800; that the earliest certain Scandinavian mention of it (about A.D. 1050) is from the Isle of Man, which was subject to strong Celtic influence; and that it reached its highest development in Ireland, whence it was carried all over the Continent by Irish musicians. There it became so well known that Dante traced the Italian harp back to the Irish one, and Prætorius expressly enumerated the Irish harp among the instruments of the Continent of Europe.[5]

Mention has been made above of Mr. Galpin's refutation of Miss Panum's theory that Ireland was the original home of the framed harp. Mr. Galpin has also explained the harp on the Ullard cross, a fact which has escaped Prof. Sachs's notice, as he, following Miss Panum, includes this instrument among the relations of the triangular harp.[6] The present writer has only a couple of comments to add. The Ostyak harp is not very strong evidence for the existence of the framed harp outside Europe, as the Ostyaks have been subject to strong European influences, both from the Russians and from the Finnish peoples to which they are akin. It may be noted, however, that this type of harp is not found among the Finns, nor yet, apparently, among the Baltic peoples re-

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[4] The reference by Prof. Curt Sachs to Miss Panum (op. cit., 1915, p. 89) is founded upon an unfortunate error, for the folio upon which the drawing of the harp occurs (in Brit. Mus. MS., Cotton Vesp. A. 1) is a thirteenth century interpolated folio. See Galpin, "Old English Instruments," p. 12.—(Editor.)

[5] Sachs, "Handbuch," p. 231 f.

[6] Sachs, "Handbuch," p. 232.

lated to them. Again, it is risky to connect the Ostyak harp with the ancient *trigonon*, even though the angular harp, which represents the immediately preceding phase of development, is found among several of the Southern Slav peoples.

Thus the problem is hardly yet solved, in spite of Prof. Sachs's excellent analysis, and a study of hitherto unknown Russian and northern material might produce valuable results,[7] but it cannot be further discussed here. On the other hand, our present study necessitates a further inquiry into the nature of the northern harp. Some light on this question may be obtained from the information regarding harp playing, as the sources for the plucked and the bowed-harps merge into one another.

Professor Finnur Jónsson has been led by his study of northern harp playing to the belief that the scalds of the north did not use a harp accompaniment when reciting their poems. He holds that the literary sources afford no evidence that they did so, but on the contrary contain much to suggest that the arts of poetry and music were completely independent of each other.[8] His reasons for this view are that the poet and the harp are never mentioned together, that even when the equipment of a scald is described in the minutest detail, a harp is never included, and finally, that the northern lays consist essentially not of "song verses," but of strophes for recitation, which were not suitable for singing to a melody. He

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[7] Prof. Sachs has himself verbally expressed this opinion.

[8] Jónsson, "Das Harfenspiel des Nordens," Sammelbände der I.M.G., IX.

notes further that the Icelandic word *kveða* does not mean to "sing," but rather to recite, with a delivery which is half way between speaking and singing.

Professor Hammerich argues on the other hand, that this "intoning" does not necessarily exclude, but rather indicates the use of a musical instrument, not indeed as support for any kind of melody, but as a free instrumental accompaniment. On this view the use of the harp by northern scalds need not be rejected.[10]

It is of some interest to note in this connection that similar modes of recitation may still be observed among certain uncivilised peoples. In describing the music of the Kubus in Sumatra, Professor von Hornbostel writes: "The melodies used in singing suggest that to the Kubu the words are of as much importance as the notes. Most of them consist principally of a kind of recitative over a small range of degrees, and the rhythm is obviously strongly influenced, if not altogether determined, by the prosody [*sic*] of the words."[11]

In the case of northern Europe, Professor von Hornbostel is of opinion that if the harp was played in connection with the recitation of lays, it was not as an accompaniment in the ordinary sense, but as independent instrumental music. This must presumably be taken to mean that the music did not furnish an accompaniment in harmony with a definite, sung melody, but contained in itself both melodic and harmonic elements, giving support and body to the recitation. The simultaneous per-

[10] Hammerich, op. cit., p. 24.

[11] Von Hornbostel, "Ueber die Musik der Kubu," Sammelbände für vergleichende Musikwissenschaft," I, p. 366.

formance of a chanted recitation and a free melody is not unknown in folk tradition. An instance is to be found in the Welsh "penillion singing," a very ancient form of art which has been preserved in Wales to the present day. It is used in competitions, and is described thus: "The southern manner is this. A harper plays an air—generally a well known one; in fact there are certain tunes that are commonly used for this purpose. He plays this air over and over again in strict time. Each competitor in his turn—supposing that they are striving for a prize—composes extempore words in rhyme which must fit the tune and be in strict time. In the north the procedure is more difficult. The singer must sing to the melody, but he must not begin with it, nor sing on the first beat of a bar. He may begin on any other portion of the bar he chooses; he must end with the melody, and he may not use the same stanza twice."[12]

In the literary sources various verbs are used to denote the act of playing on the harp. The most usual one is the Icelandic word *slá*, Swedish *slå* (strike, or touch), employed in the sense of "producing tones," sometimes with the strings as accusative, and sometimes with the notes or piece of music;[13] *ek kann slá hörpu* ("Didr.," p. 248) *tekr Gestr hörpu sína ok slær vel ok lengi* (Flat. I, 348 [15]).[14]

According to Fritzner, the word *slá* is also used in the following senses: (1) to put something in motion in order to hit with it, (2) to move, to change from one place

[12] F. Keel, "Some Characteristics of British Folk Song." Report of the Fourth Congress of the I.M.S., p. 181.

[13] J. Fritzner, "Ordbog over det gamle norske Sprog." The sources are indicated above by the abbreviations used in this work.

[14] For additional examples see Fritzner, s.v. *slá*.

or position to another, (3) to make ready, set in motion. As instances of the last meaning he quotes *slógu fylking*, *slá hring*, *slá hringleik*, *slá danzleik*. Thus the expression "*slá hörpu*" does not in itself prove that the harp was plucked with the fingers, although this is an idea which has taken firm root in general opinion.

We have seen from the Ormsö usage that the Swedish word *slå* has been employed up to the present day in the sense of producing tones with a bow. *Slá* occurs also in one of the older sources in this sense, though only once, viz., in Fm. VII, 356 12, where we find *slá fiðlu*. The author has seen *draga fiðlu* in two passages.

Besides *slá hörpu*, the expressions *leika hörpu* (Stj., 458 25, 460 21, 22) and *draga (dró) hörpu* (Fm. VII, 19 13) also occur. They give no help in deciding how the harp was played. It is possible that *draga hörpu* can be connected with the word *drehen* in *drehleier*, the German counterpart of the nyckelharpa. One passage in Stj. 458 27, "*tók hann hörpu sína ok drap strengi til sláttar*," suggests that the harp was used for dance music, and this may have been its principal use if it was not played by the scalds.

Thus we see that the ancient lays and sagas give but vague indications as to the nature of the harp. They cannot be used to prove that the word "harp" only meant a plucked instrument, nor that it was never used for one played with a bow.

Folk-songs also furnish material which must not be neglected. The northern folk-songs often mention the harp, sometimes in passing, as part of the knight's equip-

ment (or the maiden's, if it is a "golden harp"), and sometimes with a description of the marvellous power of the harp player.

One of these poems gives a notable description of the origin of the harp. It is one of the most widespread of the older northern folk-songs, known as the "Song of the Two Sisters," or "The Wonder Working Harp,"[15] and may be from the thirteenth century or earlier. Its gist is as follows. Two sisters, the younger of whom is betrothed, go down to the shore. The elder pushes the younger into the water, and does not let her get out, although she promises to give up her betrothed. The younger drowns. The body is found, by either a fisherman or a musician, in most of the variants, and is made into a harp, or in a few cases a violin. The elder sister marries the younger's betrothed, but at the wedding the musician plays on the harp made from the body of the younger sister, which has magical power.

The description of the instrument is the most interesting part of the story for our present purpose. One variant, quoted by Geijer-Afzelius (16, I), says that a musician lived by the shore and saw the body floating.

17. "He took the maiden's breast so white,
That harp must sing with a voice of delight.

18. He took the maiden's fingers sweet,
And made of them pegs for his harp so neat.

19. He took the maiden's golden hair,
And of it he made him harp strings there."

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[15] Svend Grundtvig, "Danmarks gamle Folkeviser," Copenhagen, 1853-1883, 5 vols., No. 95, "Den talende Strengeleg."

There is an obvious resemblance between this description and that given in the Finnish lays. About the origin of the kantele, it is important to note that the northern folk-song mentions the bow. The wonder-working harp is conceived as played with a bow in four Danish variants, three Swedish, one Norwegian, and one from the Faroe Islands.[16]

None of the Danish variants mention the word "harp." Grundtvig thinks that the words "*legeskrue*" (pegs), made from the maiden's fingers, and "*legestrenge*" (strings) made from her hair, might suggest the harp, but when the musician "strokes" the strings we see, he says, that the violin is meant, and it is, moreover, expressly named in two of the variants. Prof. Liestøl also thinks that the Danish variants probably mean the "*fela*" in all cases where they do not name the instrument.[17]

In the variants recorded from Denmark the instrument itself is not made from the maiden's body. The musicians simply "take" her fingers and golden hair and make of them "pegs" and "strings"—"*legeskruer*" and "*legestrenger*," or, in still clearer words, "*deres Fiolestrenge*" (strings of the violin), and "*deres Fiolestok*" (bow of the violin).

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[16] The references to these variants are as follows: Denmark, Lolland, Grundtvig DgF 95 E. 15; Falster, Grundtvig, DgF 95 C. 4; Stevnsherred, Grundtvig DgF 95 A. 19-21; Mors, DgF H. 13 (III, 87, 64). Sweden, Södermanland (Grundtvig DgF 95), Hyltén-Cavalius, K. B. MSS. Bitt. sv. saml. 3, 3; Gotland, Grundtvig DgF 95, H.-C., Vitt. sv. saml. 3, 3; Swedish Finland, Nyland, author's collection. Norway, Norske Univ. Annaler, 1850, p. 497. Hammershaimb, V.K., Faerøisk Anthologi, I, p. 23.

[17] Liestøl, K., "Dei tvo Systar," Maal og Minne. 1909, I, p. 49.

The bow is here connected with the maiden's hair, which is used for it as well as for the strings. On the other hand, the variants from Sweden and Swedish Finland, most of which mention a "harp," are more explicit about its construction; the body of the harp was made from her breast, the pegs from her fingers, strings from her hair, and the bow from her arms or legs.

All the Norwegian, Icelandic, and Faroe Island variants name the harp as the instrument made from the body which was dragged up from the sea. The Norwegian one quoted above says that the "*Hørpøstøkka*" was made from the maiden's arms, and for this reason the author has included it, although with great hesitation, among those in which a bowed instrument is intended. The other variants usually make the "*Hørpøstøkka*" from her body, but the fact that it is here made from her arms, which in both Swedish and English variants are said to be used for the bow—and that if these were regarded as symbolising a harp they would suggest the triangular form, which is in no way mentioned in the lay—seem to justify the author's view. The Faroe Island variant has the word "*harpuskjarm*," which Grundtvig explains as "a bone used to play the harp (plectrum)," but for technical reasons it would seem more likely to refer to a bow.

The lay also occurs in England, as has been indicated above, and was very widespread there. Discussing the connection between the English variants and the northern ones, Prof. Liestøl says: "We have seen that the English form has several original features, and on the whole it is earlier than the northern form." He explains this by saying that the lay was first composed in England or

Scotland, where two different versions existed, both of which then came to Scandinavia, but by different routes, the one to Norway, Iceland, and the Faroe Isles, the other to Denmark.[18]

Whether one fully shares this view or not, it is important to note that the English variants regard the instrument as one played with a bow. Among those quoted in Child's careful study of the song, we find (L 1):

> And all her hair, so long and fair,
> that down her back did flow,
> O he did lay it up with care
> to string his fiddle bow,

which may be compared with the Danish variants, and (L 2):

> And what did he do with her arms so long?
> He made them bows for his violon,

in which the bow is made out of the arms.

There are, further, a few scanty and vague hints as to the number of the strings, sometimes in connection with the mention of the pegs, sometimes when the material of the strings is given, and occasionally in the description of the harp's magic power. In two of the Danish variants given by Grundtvig the musicians made pegs of the maiden's "fingers five." One Norwegian version quoted by Landstad (53) says that they made pegs of all her ten fingers:

> sá tók dei hennas fingar ti
> og gjorđe skruvar af alle di.

Two Icelandic and several English variants say that her hair was made into three harp strings:

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[18] Liestøl, op. cit., "Maal og Minne," 1909, p. 51.

Hann tók hennar gúla hár,
gjorði úr hörpustrengi þrjá.

hann tók hennar gúla hár,
spann í hörpustrengi þrjá.

Child thinks that "perhaps the original conception was the simple and beautiful one which we find in the English B. and both the Icelandic ballads, that the king's harper, or the girl's lover, takes three locks of her yellow hair to string his harp with."[19]

On this Prof. Liestøl says: "The sacred number three was no doubt the reason and the essential condition of the harp's being able to speak."[20]

The magic power of the harp is revealed in the three notes corresponding to the three strings, sounded by the player when he comes to the wedding. According to Child, they are mentioned in three English, one Icelandic, two Faroe Isle, six Swedish, and four Danish ballads.

Prof. Liestøl calls attention to the fact that the number three is mentioned in the oldest and most complete of the English versions.

An by there came a harper fine,
That harped to the king at dine.

When he did look that lady upon,
He sighed and made a heavy moan.

He's taen three locks o' her yalloo hair,
An with them strung his harp sae fair.

The first tune he did play and sing,
Was, "Farewell to my father the king."

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[19] Child, "English and Scottish Ballads," Boston, 1882-1898.
[20] Liestøl, op. cit., p. 44.

The nextin tune that he played syne,
Was, "Farewell to my mother the queen."

The lasten tune that he played then,
Was "Wae to my sister, fair Ellen."

Many of those from Scandinavia and Iceland give larger or smaller numbers, in the opinion of Prof. Liestøl, because the original number had been *forgotten.* "It is clear that so soon as the number of strings had been forgotten, one could give the harp as many or few notes as one liked."

The three notes sounded from the harp do not necessarily require it to have had three strings. The number three was sacred, and therefore is used in the sagas and ballads. But it is not inconceivable that the notes were connected with the number of strings, especially as there are, in fact, three of them in most of the cases where there is any hint as to their number.

It would therefore seem to be certain that the ballads often refer to a three-stringed instrument, and as they also mention the bow, it must have been a bowed instrument with three strings.

We now come to those passages in the ancient sources where a bowed instrument is expressly mentioned, and here Prof. Hammerich's remarks must be quoted in full. He writes:

"When, however, a couple of our ancient sources say that bowed instruments were used at this early date, the statements must be regarded as anachronisms on the part of their authors, for there is no evidence of the existence of bowed instruments in Europe at all until a comparatively late period, and the earliest instances date from about A.D. 980 (a psalter from Hainault, in Belgium,

and a carved ivory box in Florence).[1] There is certainly an anachronism of this kind in Sven Aagesøn's "Chronicle,"[2] in the account of the embassy sent by the Emperor Otto of Germany to Queen Thyra Danebod of Denmark, at Eider, where we read: "After them came leaping and dancing a crowd of jugglers, who played on the *violin*, and beat the cither and drum." This is supposed to take place before the year 900.[3] It must be an anachronism, too, when Snorre's "Ynglinge Saga" says that King Hugleik of Upsala had in his service all kinds of musicians, harpists, giga players, and fiddlers, and when something of the same kind is told of Olaf Skotkonge in Sweden. It is impossible to suppose that the noblest instruments of modern days, the bowed instruments, whose origin is still wrapped in such deep obscurity, were known up here in the far north long before their first appearance in the south can be traced."

"And yet there is one remarkable circumstance in this connection which may not be ignored though it cannot be explained. The very first words of the famous Icelandic "Njals Saga" say: 'A man named Mørd, with the surname *Gigia*, lived in the farm called Vold.' The Icelandic word 'Gigia' denoted a bowed instrument which is also called 'Fiol' or 'Fedel,' and nothing else. It appears later as a name in the Icelandic 'Book of Names' (twelfth century). It is true that the 'Njals Saga' was not written down until the thirteenth century, but in the

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[1] In the Carrand Collection, Florence, ninth century. (Editor.)

[2] End of twelfth century.—(Editor.)

[3] The Emperor Otto I of Germany was not born till 912; he was crowned Roman Emperor in 962 and died in 973.—(Editor).

opinion of learned Icelanders who have been consulted, it is impossible that the surname should have been added then. 'Gigia' must, in fact, have been the original surname of the Icelandic saga hero, Mørd! And Mørd lived about A.D. 950, i.e., at or a little before the date when bowed instruments (as far as we know) first appeared in Europe. How can this be?[4] It is scarcely possible that Mørd of Iceland 'invented' the fiddle. Can he have travelled abroad, 'to Scotland, Ireland, Norway

[4] A solution of Professor Hammerich's difficulty may be suggested, viz., that the cognomen *Gigja* bestowed not necessarily contemporaneously but more probably posthumously upon Mørd, which also appears later in the Book of Names of the twelfth century, may be referred for its original meaning to the old Icelandic sources. In that ancient language, the word *geiga* has the meaning *to take a wrong direction, to move at random* (cf. G. T. Zoega, "Old Icelandic Dictionary," Oxford, 1910, and R. Cleasby, "Old Icelandic Dictionary," Oxford, 1869), while in old Norse (almost identical with old Icelandic until the beginning of the twelfth century) *geiga* means "*to go astray or crooked.*" The Njal Saga presents a vivid contrast between two lawyers: Njal of legal probity, and the villain, Gigja Mørd, the crafty unprincipled lawyer, a master of legal chicanery. One seeks in vain in the Saga for any hint of Mørd's musical ability, for any mention of his use of *gigja* or fiddle for instance, to accompany his daughter, when she sings to him of her wrongs, nothing in fact is found that could support the musical meaning assigned *in modern times* to Mørd's cognomen *gigja*. It seems obvious therefore that the clue is to be found in the old Icelandic and old Norse equivalents: Mørd was the lawyer whose ways were crooked, who had taken the wrong direction, and the cognomen was bestowed upon him in the Saga in order to bring this character into sharp contrast with the honoured personality of Njal; a signification evidently still appreciated by the writer of the Njala in the thirteenth century, in spite of the fact that the bowed instrument, *Geige, Giga, Gigue*, was already well known in Europe; the nouns *Gîge, Geic* and the verb gîgen were in use in M. H. German in connection

or Denmark,' and there in one way or another come in contact with the new instrument? We will not discuss this problem further here, only note the fact of its existence."[5]

But the problem, whose existence Prof. Hammerich here notes, can be solved without any great difficulty if one only allows to the sources quoted their real value as evidence. Prof. Hammerich seems to be altogether too cautious, when he regards the mention of bowed instruments as an anachronism on the part of the authors. These statements should be taken for what they are: evidences of the existence of bowed instruments in the north. They are by no means isolated, although the earliest ones. The Old Law of Vestergötland, of about A.D. 1225, speaks of "him who goes with the giga or fares with the fiddle."[5a] The Didrik saga, from the middle of the same century, tells how the eminent musician, Isung, boasted to King Osantrix, saying that there was little music in the land of the Vikings, as he could play no better than the rest; "*ek kann kveđa, ek kann slá hörpu ok draga fiđlu ok*

with music early in the twelfth century before the Njal-Saga was written down; it is easy to see how the confusion of meanings arose through phonetic similarity.

In making use of the material of this ancient Saga in support of theories of the origin and evolution of musical instruments, it is well to remember that although the story of the Njala *is placed historically* in the tenth and eleventh centuries, there is no evidence whatever that the cognomen *Gigja* signified a musical instrument *at that early date;* the evidence on the contrary is against such an assumption.—(Editor.)

[5] Hammerich, "Dansk Musikhistorie," page 24 f.

[5a] Pæn sum mæp gighu gangær ællær mæp fiplu far, Collin and Schlyter, "Corpus juris," I, page 67, but with Sjöros's normalisation (Publications of the S.L.S., Volume 144). Date according to Olriks, "Opuscula philologica."

gigju ok allskonar strengleika."[6] Later sources repeatedly mention both the giga and the fiddle in the same sort of context.

The reason which Prof. Hammerich gives for his hesitation is that no traces of bowed instruments are found in Europe before about A.D. 980.[7] But on this point opinions differ. Prof. Sachs asserts that the Utrecht Psalter, from about 860, shows a bowed instrument, a "fiedel," and even if this may be incorrect, and if it is uncertain whether the British chrotta mentioned by Venantius Fortunatus about A.D. 600 was a bowed instrument or not, yet, according to O'Curry,[8] the Irish already had their bowed *timpan* at these dates. It is therefore impossible to adhere to the view so zealously championed by Miss Panum, that the bow was not introduced into Europe until about A.D. 1000. The name *Gigja* in the "Njals Saga" may thus be regarded as the earliest evidence of that instrument's presence in Iceland.

The sources say nothing as to the nature of the oldest bowed instruments in the north. It is worth noticing, however, that the different names of instruments occur together; *fiol*, *cithar*, and *trumma* (Sven Aagesøn's "Chronicle," end of twelfth century), *gigha* and *fipla* (Old Law of Vestergötland), *harpa*, *gīgja*, and *fipla*, (Dikrik Saga), *harpari*, *gigjari*, and *fiðlari* (Ynglinga

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[6] "Didriks Saga," edited by Bertelsen, 248 2 (142).

[7] This is more than a century too late for this well known casket, which was ninth century work. Cf. note 3, p. 124. (Editor.)

[8] Galpin states that Prof. Curry's suggestion of a bow is extremely doubtful, and that the Professor admitted that the passage on which he founds his idea is very late and obscure. Op. cit., p. 68.—(Editor.)

Saga, Heimskringla, *c.* 1250), *harpa* and *gígja* (the Saga of Olof the Saint, the Flatö Book, Fornmanna sagas). It seems clear from this, not only that the harp was regarded as a separate instrument, but also that a distinction was drawn between the *giga* and the *fidla*. This has already been pointed out by Tamm, who says in his dictionary that the word *giga* "often occurs in old Swedish and other old languages in connection with the old Swedish *fidla*," adding: "it has been conjectured that the two instruments differed by the presence or absence of a finger-board."[9] It does not appear who first made this guess—if it is not the author's own—but it seems to be a good one. One can hardly imagine that the two words would occur together so often in similar contexts if they did not mean two different instruments, or at least two different forms.

This has its importance, for Prof. Sachs holds that no one has yet succeeded in defining a group of mediæval stringed instruments called *fiedel* or *fidla*, as opposed to those called *geige* or *giga*. He says that no very precise distinction was drawn between the two groups in the Middle Ages, and that the *trumscheit*, *drehleier*, *lyra*, *rebec*, and certainly *rubebe*, could equally well be called *fiedel*, *geige* and *rotta*. The *fiedel* gradually developed into three families of instruments, the *lire*, *viola da gamba* and *viola da braccio*. The differentiation between them began in the fifteenth and was completed in the sixteenth century.[10]

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[9] "Etymologisk svensk ordbok," s.v. giga.

[10] A passage in Busant (GA I, 348) is quoted as evidence for this, but does not seem to be particularly characteristic. "Real-lexikon," s.v. fiedel.

In view of the strictness with which the northern sources keep the *giga* and *fidla* differentiated, it is difficult to accept Prof. Sachs's view, although, judging by the passage in Njals's Saga, quoted above, it seems to have been adopted by Prof. Hammerich. Neither can one unreservedly accept Dr. Norlind's statement that "the word *giga* denotes a plucked instrument with a finger-board."[11] By the date of the Old Law of the Vestergötland (1225) at least, the *fidla* and *giga* in the north would seem to have differed from each other sufficiently to be distinguished by people who were not musicians. Whether one of them had a finger-board and the other none, or whether the difference consisted in some other detail is a separate question. Both were probably played with a bow, though the words used to denote playing give no certain indications. While "slá" is usually used for harp playing, "leika" but rarely, and "draga" only very occasionally, "draga," "slá" and "spela" are used for the fiddle, *fidla*. "Draga," "dró," seems to be the only term for playing the *giga*, so that one might possibly see here a connection with the *drehleier*, *lira*.

The material sources are few in number, but not the less valuable for that, especially in comparison with the literary evidence. They consist partly of actual objects which have been preserved and partly of representations, and can typologically be classed as bowed-harp, round lyre, and fiedel.

There are three certain examples of the bowed-harp in Scandinavia: (1) the twelfth century sculpture in Trondh-

[11] "Svensk musikhistorie," second edition, p. 12.

jem Cathedral, (2) the Öje instrument in the Nordisk Museum (Fig. 52), and (3) the bowed-harp in the Historical Museum of Music, Stockholm.

The Trondhjem instrument (Fig. 51) was first mentioned and reproduced in the catalogue of the exhibition of musical instruments held in Oslo in 1904 by the Norwegian Folk Museum. The author of the catalogue, Mr. Harry Fett, only says that "the instrument is so indistinct that one can hardly get a clear idea of its nature."[12]

Fig. 51. Stone carving in Trondhjem Cathedral (12th cent.)

It was reproduced in the following year by Miss Panum, who spoke with more decision, classed it among "Unknown Stringed Instruments," and described it as follows: "It seems to consist of a long, rectangular frame made of four pieces, on which three or four strings are stretched. It cannot be any kind of finger-board instrument, on which the strings are stopped, for the left hand is fully occupied in convulsively clutching the upper side piece, while the right hand wields the bow. Thus the music produced can only have had as many notes as there are strings. Moreover, judging from the position of the bow, all the strings must have vibrated at once. The open mouth of the player suggests that he is chant-

[12] Fett, Norsk Folkemuseums Saerudstilling, Nr. 2, "Musikinstrumenter," p. 7.

ing a song suited to the occasion, while steadily sawing away at one and the same chord."[13]

This description is based on a misconception throughout. The instrument is a typical narrow-holed bowed-harp in both dimensions and construction, and only differs from the instruments of that type previously described by the addition of another (bourdon) string. The way it is held is thoroughly characteristic. The string used for the melody is stretched over the finger-hole, as in the other known instruments, but in a stone carving it can naturally not be shown over the fingers. The musician even holds his bow in the same way as the Finnish and Esthonian bowed-harp players.

Miss Panum's misunderstanding of the instrument is explained by the fact that in 1905 the parallels from further east were still comparatively unknown. This statement is later made by Miss Panum herself in the second part of "Middelalderen's Strengeinstrumenter," page 55. Erik Eggen also at one time overlooked the eastern connections of the instrument (through Finland), and therefore failed to explain it satisfactorily. In "Norges Musikhistoria," where the same illustration again appears, he connects it with the recently reconstructed Icelandic *fidla*, and says that the Trondhjem sculpture can only represent that instrument. But since the Swedish edition of the present work was published he has declared his conviction that it is a bowed-harp.[14]

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[13] "De Folkelige Strengeinstrumenter i Nordens Middelalder," Forening til norske Fortidsmindesmaerkers Bevaring. Aarsberetning for 1905, p. 143.

[14] Gula Tidend (Bergen), April 14, 1924.

The Icelandic *fidla*, with which Mr. Eggen first connected it, is in itself a remarkable instrument. It has now been reconstructed from the old descriptions, and presents features of great interest.[15]

When Mr. Eggen asks whether the reconstructed Icelandic instrument is not "Norwegian as much as Icelandic, so that we really have the old Norwegian *fela* here before us," he seems to be confusing the order of events. Whether the reconstruction is right or not, the instrument was probably closely related to that in the Trondhjem sculpture. It represents a northern type which was widely distributed, and of which the structure and technical principles are perfectly clear. They have in common their most important characteristics, the nail technique and position of the hand. There is an Icelandic riddle, "The back of the hand is turned towards her," and the answer is a *fidla*, which cannot be misinterpreted. But in structural features the Icelandic reconstruction stands by itself.

There is a statement from the Shetland Isles which indicates that the bowed-harp was also known in that part of the old Norwegian empire. A. S. Edmonstone, writing in 1809 in "Zetland," II, p. 60, says: "Before violins were introduced, the musicians performed on an instrument called a *gue*, which appears to have had some similarity to a violin, but had only two strings of horsehair, and was played upon in the same manner as a violoncello."[16]

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[15] The most important literature about the fidla includes Bjarni Porsteinsson, "Islenzk Thjoðlög," p. 67 ff., in Mathias Torðarson's "Islensk fiðla," Arbók hins islennzka fornleifafélags, 1919.

[16] Cf. Eggen, "Skaalastudier," p. 24.

The only Swedish narrow-holed bowed-harp known is that from Öje, in the Dales. It is first mentioned in a manuscript by Södling, "Svenska folkmusikens Historie och kulturhistoriska betydelse,"[17] which was written about 1875, and is now preserved in the Academy of Music. It gives an illustration of the instrument, with a note: "Found by N. M. Mandelgren, May 25th, 1869." The finder presented it to the Nordiska Museum in 1875, and in 1906 Miss Hedvig Boivie, curator of the musical department, published a detailed description of it in "Fataburen." She says that the instrument (Fig. 52) is 78 cm. long, 29.8 cm. wide, and made of spruce wood, and goes on: "It is difficult to decide whether the three strings were made to sound by plucking with the fingers or a plectrum or played with a bow. The existence of a button shows that it had a stringholder. One cannot say whether it had a bridge or not, for there is no trace of one. A stringholder and bridge generally indicate a bowed instrument, but, on the other hand, its shape suggests that it was plucked. It has not the usual incurvations in the sides which facilitate the use of the bow. Moreover, the soundboard is perfectly flat, so that if there was no bridge the bow would have to rub against it with every stroke, and all three strings would have vibrated at once. But among the drawings of mediæval instruments there are several examples with a flat soundboard and no bridge which nevertheless were played with a bow, and another example is found in the bowed kantele from Carelia, in Finland. The square hole in the upper left-

[17] Norlind, "Sv. tidskrift för musikforskning," fourth year, p. 110.

hand side of the Öje instrument seems only to occur elsewhere in this type of kantele. Probably the player put his hand through and held the instrument by the narrow outer rib. One cannot suppose that the hole was made in order to enable him to stop the strings more easily, for it would have been exceedingly inconvenient and back-handed to get at them in this way with the left hand, besides which its movements would have been hampered by one of the strings running right across the hole. It was equally impossible to stop the outer string, for this ran too near the middle to be reached from the other side. None of the strings were stopped, so the compass of this "lute" did not exceed three notes, so, whether played with a bow or plucked, it was probably only used for accompaniments."[18]

Miss Boivie has rightly indicated the features which suggest the use of a bow, and clearly surmised the character of the instrument. Being unacquainted, however, with the technique of the Carelian bowed-harp, she has drawn the erroneous conclusion that the strings could not be stopped and that the compass was restricted to three notes. She has possibly been influenced by Miss Panum's views about the straight sides of the Welsh *crwth* and the hand-hole in the Trondhjem instrument.

The Öje instrument is related to the Carelian bowed-harps, not only in possessing a hand-hole, but also in the way in which it was played, the one characteristic depending on the other. It can be directly classified among the narrow-holed, three-stringed bowed-harps (see p. 43),

[18] "Fataburen," 1906, p. 235.

although there are obvious differences even between it and the instrument which it most resembles. The button indicates a very advanced phase of evolution, for the original tailboard has shrunk away to the indispensable

Fig. 52. Narrow-holed bowed-harp from Öje, Malung, Swedish Dales. In the Nordiska Museum.

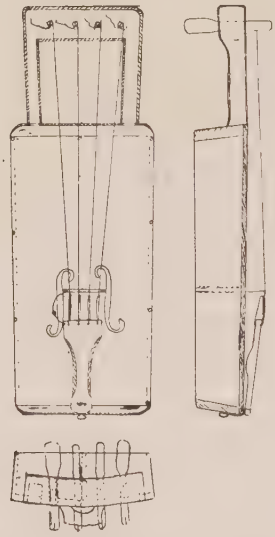

Fig. 53. Wide-holed bowed-harp from Småland, in the Historical Museum of Music, Stockholm.

little projection; nothing remains but the little bit of wood between the two holes of the Carelian instrument. At the same time, the lower end of the body has been given a rounded form, a decided advance from the point of view of enlarging the resonator. The angular shape of the hand-hole has no particular significance.

The Swedish wide-holed bowed-harp in the Musik-

historiska Museum in Stockholm (Fig. 53)[19] was secured by the curator of the Museum, the late Mr. Svanberg, in 1912. The person from whom he bought it said that it was "a folk instrument from Småland,"[20] but Mr. Svanberg himself thought that it had been imported from Esthonia. The writer was at first inclined to share this view, but abandoned it after examining more closely the Swedish-Esthonian examples. A prominent characteristic of the Småland harp is the fact that the finger-piece is narrower than the resonator, a form quite unknown in Esthonia, where, moreover, the harps have definite local features; the hollowed out Ormsö instruments with clumsy arms are quite distinct from those of Dagö, which have slender arms and are constructed of several pieces (Figs. 38-43). The writer is now convinced that the seller's statement is to be regarded as correct, and that this harp really is "a folk instrument from Småland." When it is taken in conjunction with the Öje and Trondhjem harps, there can be no doubt but that this type of instrument was known in Scandinavia, and that the evolution from narrow-holed to wide-holed bowed-harp took place on Scandinavian soil.

The author's "Översikt" (Review) contained the conjecture that the harp found in Swedish Esthonia was a survival from the scanty possessions which the Swedish colonists carried with them when they migrated eastwards, an event which probably took place during the Viking age. This conjecture assumed that similar in-

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[19] The late Mr. Svanberg furnished the above drawing at the author's request.

[20] Letter from Mr. Svanberg to the author, dated April 4, 1913.

struments exised in Sweden at least somewhat earlier than the date of the Trondhjem sculpture. The harp shown there has four strings and is therefore not of the most primitive type; the advance from two to four strings may have taken centuries. It is possible that evidence for this may be found in the amber "bridge" (Fig. 54) from the Broa find at Halla, Isle of Gothland, shown by the Swedish State Antiquarian, Prof. Bernhard Salin.[1] Prof.

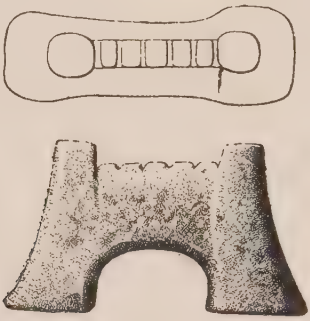

Fig. 54. Amber "bridge," from Gothland.

Nils Lithberg drew the author's attention to this "bridge" more than four years ago, and was then already inclined to connect it with the talharpa of Swedish Esthonia, but at that time the writer had no opportunity of going into the question, and was a priori somewhat sceptical about Prof. Lithberg's hypothesis. It is true that the "bridge" may have belonged to a plucked, just as well as to a bowed instrument, but nevertheless it is important enough to be mentioned here.

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[1] "Fyndet från Broa i Halla, Gotland." Fornvännen, 1922, No. 4.

The Broa find was reported to the Historiska Museum in 1899, having been discovered when a big stone was being sunk into the ground. An extensive layer of cobblestones was found about one foot below the surface, and about a yard below these the skeletons of a man and a horse, with a sword and numerous other objects of different kinds. The "violin bridge" was lying to the right of the man's head. "The objects belong to a transitional period, when the latest offshoots of Teutonic animalistic ornament were being superseded by designs derived from the west," a period which began about the year 800 A.D.

Prof. Salin wrote: "One of the most interesting things in the find is undoubtedly the amber object shown in Fig. 23 (i.e., of his article). This must have been the "bridge" of a stringed instrument, and, as can be seen from the illustration, have supported either four or six strings. . . . . What can have been the nature of this musical instrument, which the departed took with him into the grave?" Seeking for the answer to this question, Prof. Salin considers the various instruments still surviving among the peasantry or used by them until recent times. His attention has been directed to the Esthonian talharpa by Prof. Lithberg, and he seems to think that this bridge belonged to a similar instrument, which he describes as the national instrument in Ormsö, and tells how it was honoured and played by every man.[2] He imagines that it may formerly have held a similar position in Gothland, and writes: "The Gothlanders are a musical people to this day, and the find shows that the gift of music has

[2] He uses and refers to the author's "Översikt."

descended through many generations. The man who took with him into the grave all the splendour described above must have been very wealthy, and the fact that he also took his harp shows that both he and his entourage held it in high honour. . . . . The 'bridge' owes its preservation to the fact that it was of amber, but it gives us an unexpected insight into the life of that distant age. It shows us the rich and powerful warrior as a musician likewise, a combination very often found in the Middle Ages, e.g., in the troubadours. At the mediæval courts, too, all manner of artists were attached to the person of the prince, who specially favoured and protected them."[3]

Another similar bridge of bone is found in Birka, Sweden, in the so-called "Black Ground." Describing this find the antiquarian, Dr. Arne, brings it up in connection with the amber bridge just mentioned and says, that two similar amber bridges are to be seen in the Central Museum in Utrecht. Dr. Arne dates the bone bridge to the beginning of the ninth century and in no case later than *circa* 1000 A.D. He says further that no statement can be made as to whence the instruments belonging to the bridges are derived, but they have been used at the same time in the North and in the West.[3a]

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[3] Summarising the results of his study of the Broa objects, Prof. Salin says that they are made by one and the same artist, who "had visited Western Europe for one reason or another, and there become imbued with new artistic ideas." He adds: "In fact, these impressions seem to have been so deep that I am almost tempted to say that he studied art in the west." (Op. cit., p. 201, f.)

[3a] Arne, T. J., Birka-Frisland. Kulturhistoriska studier och uppteckningar. Hallands Hembygdsförenings skriftserie I.

I mention these two interesting bridges although it remains to be seen whether they belonged to instruments plucked or played with a bow.

The second type mentioned above as being found in the Scandinavian material is the round lyre. Miss Panum is the writer who has dealt most fully with this type. In discussing its characteristics and relation to the ancient lyre, she describes how the latter instrument was inherited by the Romans, who then carried it to Gaul and the British Isles. She then continues: "A new type of lyre originated in the northern half of Europe in the ninth century, and before long quite superseded the ancient lyre. It differed in its very outline from its sharply designed predecessor. In the new type the arms and yoke coalesce into a kind of arch, which gives the instrument some resemblance to a padlock. There is a narrow string-holder attached to the foot of the resonating body, and from this the strings are stretched to pegs set at wide intervals in the curve of the arch."[4]

The round lyre appears in the northern material in three substantially different forms, two of which are found in pictorial representations of Gunnar's Saga. One of these occurs in the carving on the back of a stall in Hiterdal Church, Norway (Fig. 55), and on a font in Norum Church, Bohus, Sweden (Fig. 56). Mr. Eggen reconstructs the Hiterdal harp in "Norges musikhistoria," and gives it four strings. This is of course an arbitrary number, as there may just as well have been three, but it agrees with the number of strings on the wide-holed bowed-harp of Swedish Esthonia. It is not this fact, however,

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4 "Middelalderens Strengeinstrumenter," p. 80.

so much as the shape of the instrument which suggests that the model was the bowed-harp. The hand-hole is round or leaf-shaped, it is true, and the arms are curved, but this is not a decisive feature, and, moreover, the hand-hole looks rounder in the reproduction than it is in the original. Taken as a whole, the reproduction is not quite true to scale.[5] The rounded sides of the resonating body are found on several narrow-holed bowed-harps. The clearly distinguishable button has its counterpart in the Öje instrument. Even the incision at the upper end can be compared with the narrow-holed bowed-harp.

The font carving is obviously intended for a similar instrument, and its nature is seen even more clearly than in the previous example.

The carvings in the Austad and Hylestad Churches, dating from about A.D. 1200 (Figs. 57, 58), show another form of lyre.[6] Mr. Eggen gives reproductions of these in which at least the resonating body has been substantially "improved."[7] This lyre comes very near the German round lyres of the twelfth century shown by Miss Panum.[8]

The stringed instrument found at Kravik in Numedal and now preserved in the State Museum in Oslo (Fig. 59) is unique. It is 75 cm. long and 25 cm. wide, and the resonating body was apparently hollowed out. According to Miss Panum, the tailboard at the lower end is pierced by a transverse hole; a similar detail has already been noted in the Ostyak instruments. The yoke is cut

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[5] "Norges Musikhistorie," p. 73.

[6] Nicolaysen, "Norske fornlevninger," p. 259.

[7] "Norges Musikhistorie," p. 73.

[8] Op. cit., pp. 82-3.

Fig. 55. Back of a stall, Hiterdal Church.

Fig. 56. Font in Norum Church in Bohuslän.

Fig. 57. Wood carving on Hylestad Church door (*cir.* 1200 A.D.).

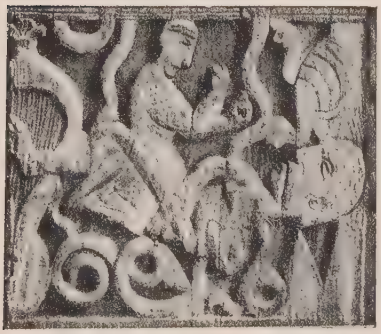

Fig. 58. Wood carving, Austad Church (*cir.* 1200 A.D.).

Fig. 59. Norwegian stringed instrument from the 12th century, in the National Museum, Oslo.

square, and has six peg-holes. This instrument greatly resembles the wide-holed bowed-harp. Both the three-stringed Nuckö and the four-stringed Dagö harps have very similar yokes, and the hollowed back may be compared with that of the Nuckö specimen. The most important difference lies in the peg-holes, which indicate a greater number of strings than are found in any known bowed-harp. But Miss Panum says that when the instrument was brought to the Museum a portion of the yoke was missing and was replaced by a new piece, and the Museum catalogue says that possibly one peg-hole too many was made.[9] The question of the original number of strings therefore remains in doubt, and the resemblance to the wide-holed bowed-harp is all the closer.

Miss Panum connects the round lyre with the ancient lyre, but expresses doubt as to its origin. We have seen that at least two of the northern instances of this type are closely akin to the wide-holed bowed-harp, which again is developed from the narrow-holed, and therefore has nothing to do with the much discussed stringed instrument of the ancients. But this by no means proves that the round lyre, as a type, is derived from the bowed-harp. The Anglo-Saxon sources throw light on this question, but as they are blended with the sources for the Welsh crwth, our consideration of these is deferred till the next chapter.

The Swedish *nyckelharpa* still remains to be discussed. This forms a separate group together with the instruments known under the names *organistrum*, *symphony*, *lira*, *vièle*, *drehleier*, *radleier*, *bauernleier*. Its most important

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[9] "Middelalderens Strengeinstrumenter," p. 86.

feature consists in the method of stopping the strings, not directly with the finger-tips, but by means of a keyboard. The strings are stroked either with a bow or by a wheel.

Prof. Sachs gives the most important facts about this group.[10] The organistrum is described as early as the tenth century by Oddo of Cluny, who died in 942, in an essay called "Quomodo organistrum construatur."[11] It was then a yard and a half long, and had eight keys, giving the compass of the diatonic octave. The *drehleier*, with other instruments, held a prominent place in social music during the Middle Ages, but fell into disrepute in the fifteenth century, and writers of the following century scarcely consider it worth mentioning. Gradually its use came to be practically confined to wandering beggars. An improved variety, says Prof. Sachs, is the German *schlüsselfiedel*, which is played with a bow, and this "survives to this day in the Swedish nyckelharpa."

Mr. K. P. Leffler is the Swedish author who has studied the nyckelharpa most exhaustively,[12] and he propounds the question whether it was introduced into Sweden from Germany or vice versa. He considers that the latter alternative is not impossible, but that more probably the instrument was brought to Sweden "during the lively intercourse which began in the reign of Gustavus Vasa and reached its culmination during that of Gustavus Adolphus."[13] He finds no confirmation of Hülpher's

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[10] "Handbuch," p. 162, ff.

[11] Gerbert, "Scriptores," 1, p. 303. (Editor.)

[12] "Om nyckelharpospelet på Skansen." Bidr. t. vår odlings hävder utg. av A. Hazelius, 1899.

[13] Op. cit., p 25.

statement that "the sagas have much to say about . . . . the fidla, nyckelgiga and sotharpa,"[14] though he is doubtful about the passages in which the salterium and the harp are mentioned together, as where the Sigurðar Jórsalafara Saga speaks of "allskonar söngfœri, organ, sinfon ok salterium, hörpur ok gígjur ok allskonar strengleikar"[14a] (Fm. VII, 97[13]). Mr. Leffler thinks that the combination "salterium hörpur" might be translated by "harp and nyckelharpas" (the name salterium would then have been given to the Teutonic harp), but he rejects this translation "as there is no other proof of the existence of the nyckelharpa at that date."[15] Miss Panum does not consider any other possibility than that Germany was the original home of the nyckelharpa; "the name *Nyckelharpa* is used to this day in Sweden for the ancient Schlüsselgeige imported from Germany."[16]

Curiously enough, these writers do not seem to have noticed the connection with one of the names for the drehleier, *symphonie*, *chifonie*, *cyfoine*, or *simfon*. The simfon or sinfon is mentioned in the saga just quoted, and also in that of Gånge-Rolf (which Prof. F. Jónsson states to be not much later than the year 1300).[17] According to Miss Panum,[18] the later manuscripts of the

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[14] Hülphers, "Historisk Afhandling om musik och instrumenter," p. 93, f.

[14a] All kinds of musical instruments, organ, sinfon and salterium, harps and gigias and all kinds of stringed instruments.

[15] "Om nyckelharpospelet på Skansen," p. 24.

[16] "Middelalderens Strengeinstrumenter," p. 111, note 3.

[17] According to Miss Panum in "Middelalderens Strengeinstrumenter," p. 144.

[18] Op. cit., p. 145.

Jókul Bues Saga, mention "psalteries, flutes, gigas, symphonies, lutes and harps, organs and drums."[19] In connection with the instrument here called simfon may be quoted the statement of Jon Arason, an Icelandic bishop

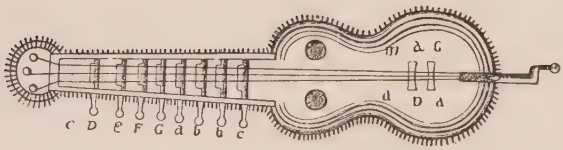

Fig. 60. Symphonia (" Organistrum ").

Fig. 61. Angel playing a nyckelharpa, Häverö Church. (Date *cir.* 1500.)

(1484-1550), that he owned a *fon* with a fine tone which had keys and strings; and also an account of a wedding at Hemna (Sør-Trøndelag), at which, according to old Norwegian custom, the dancing was accompanied by the

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[19] Fritzner gives also the following instances: leikarinn tók nú í sinfons stað söngfœri sœmiligs siðferðis, Heilag. II, 444[6]; sumir slá hörpur eða gigjur, sumir simphon eða psalterium ok timpanum, Konr. 83[16]; sumir leika salterium ok simphon, sumir troða organum, sumir berja bumbu, en sumir blása í trumbu, el. 119[3].

[The fiddlers now took other instruments instead of the sinfon [an] honored musical instrument. Some played harps or gigias, some simphon or psalterium and timpanum. Some played salterium and simphon, some performed organum, some played bumbu and some blew the trumbu.]

singing of warlike ballads, while every man played his *symfoni* or his *langspil*, whichever he could best.[20]

In his "Reallexikon" Prof. Sachs places the word *symphonie* as a name for the drehleier in the twelfth to sixteenth centuries; in the "Handbuch" he has: "*symphonia* (thirteenth to sixteenth century)."[1] The present writer has not been able to ascertain when the word first occurs, but in any case the northern instances of its use are remarkably early compared with those from the Continent. Moreover, the painting showing a nyckelharpa in Häverö Church, Uppland, which dates from about the year 1500, is probably older than the illustration given by Martin Agricola in "Musica instrumentalis deudsch," Wittenberg, 1528. It would seem, therefore, that this instrument was known in the north at about the same time as on the Continent, and was very general and popular there, at least in places, judging from the wedding description quoted above. In the present day its survives mainly in the middle of Sweden, but it was known in Norway also. The Nordiska Museum owns a *lökkelje* from Søndre Helgeland.[2]

As for the origin of this group of instruments, Prof. Sachs, after quoting the tenth century description (organistrum) mentioned above, goes on to say: "As the evolution of the type was at that date already complete, the origin of both the wheel and the keys is hidden from us. It must be assumed, however, that the latter have some connection with the monochord."[3]

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[20] "Norsk Musikhistorie," I, p. 78, f.

[1] "Handbuch," p. 163.

[2] Leffler, op. cit., p. 27.

[3] "Handbuch," p. 163. Cf. Galpin, "Old English Instruments of Music," p. 102.

This connection is not impossible, but there is also another possibility which is suggested by the points of resemblance between the nyckelharpa and the bowed-harp. The similarity of name is probably not of much importance as evidence, seeing that the word harp is applied to such a variety of instruments, but there are several other common features. In both instruments the resonating body is hollowed out of a single piece of wood;[4] both have posterior pegs, and the tailboard or

Fig. 62. Keyed psalmonica from Ingå. National Museum, Helsingfors, No. F. 2083. (Modern.)

button is similar. But the most important resemblance is in the method of stopping the strings. At the first glance, there may seem to be a wide difference between stopping the strings with the nails or back of the fingers (bowed-harp) and the use of the keys (nyckelharpa), but on closer examination it would seem to be only one step, and one which could be taken without any extraordinary power of invention. The essence of the nail technique in the bowed-harp is a raising of the fingers (the strings are touched from below, at least diagonally), or, one might say, an opening of the hand. The contrary finger move-

[4] Leffler, op. cit., p. 12, says that the body of the nyckelharpa always consists of a hollowed piece of spruce wood, and that the soundboard is also of spruce.

ment is more convenient, and it was natural to seek for a method of stopping with that movement. As there was no finger-board, and the stopping consisted in the pressure of the nails (hard objects) against a freely stretched string, small upright wooden pins were used instead of the nails, and fastened to keys, which thus allowed the movement desired. This "invention" was really a small one compared with the improvements which have been made in instruments of different kinds in the course of centuries. An analogous transition, at least in a certain sense, may be observed in the keyed psalmonica from Ingå, preserved in the National Museum, Helsingfors (Fig. 62).

The conjecture that the keys were thus developed from the nail technique gains support from the general evolution of the nyckelharpa. In its earliest forms the arrangement of keys and strings is exceedingly simple, and there is almost as much resemblance to the bowed-harp as to the more highly developed nyckelharpa.

There are two types of nyckelharpa which must be specially mentioned: (1) the instrument in Anders Zorn's collection at Mora,[5] and (2) that belonging to Mr. Leander Häll, a peasant farmer in the parish of Esse, Ostrobothnia. The Mora instrument is dated on the back 1526, but apart from this fact it is in construction also the oldest known instrument of its type.[6] It has had three strings,

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[5] An absolutely similar instrument, with holes for four pegs, but no keys, is now in the Nordiska Museum, presented by H.R.H. the Duke av Dalarna.

[6] The writer saw this instrument when visiting Mora in 1912. Mrs. Emma Zorn has now been so kind as to supply the illustration, and also the rubbing from the back of the instrument.

and nine keys. Only one string seems to have been used for the melody, and this, to judge from the distances between the keys, gave the following scale: d^1 e^1 f^1 g^1 a^1 $b\flat^1$ c^2 d^2 e^2 f^2—that is, if the string was tuned to d^1

Fig. 63. Nyckelharpa in Zorn's collection, Mora, 1526. (See Fig. 66.)

Fig. 64. Nyckelharpa from Esse, Ostrobothnia. (Modern.)

Fig. 65. Modern nyckelharpa.

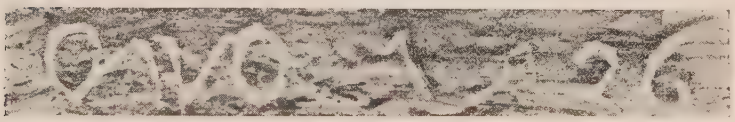

Fig. 66. Rubbing from the back of the Mora nyckelharpa, showing date 1526

when unstopped. It is impossible even to guess at the tuning of the bourdons. The distance between the seventh and eighth keys is distinctly short. Even allowing for the fact that the intervals decrease upwards, e^2

must have been rather flat. Melodies played on this instrument—which possibly represents a particular phase of development—must therefore have had a predominantly minor character, although on later nyckelharpas minor melodies are hardly ever played.[7] It is noteworthy that this specimen has a "five point" soundhole, an important point of agreement with the Carelian bowed-harps. The square soundhole, a rare form, also occurs on the narrow-holed No. 11 (Fig. 19), the only bowed-harp from the other side of the Russian frontier, but also the one which most nearly resembles the Öje instrument.

The Esse harp closely resembles the Mora one, but represents a more advanced phase. Four strings and ten keys show that it had a larger compass. The construction of the resonating body indicates certain acoustic improvements. In this instrument the character of a nyckelharpa is fairly well marked.[8]

As has been mentioned above, Prof. Sachs regards the German *Schlüsselfiedel* as "an improved variety" of the *Drehleier*. He also states that chronologically the *Drehleier* (with a wheel) is the earlier, and the *Schlüsselfiedel*-Nyckelharpa (played with a bow) the later form, a conclusion which had also been reached by Mr. Leffler. The latter says: "Out of the chaos of names in which mediæval instruments have been involved, no expression emerges which can be understood as a word for a bowed lyre." He seems to reject the evidence that the *vièle* was played

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[7] "Nyckelharpospelet på Skansen," p. 15.

[8] The Esse harp was discovered in 1903 by Mr. Einar Hedström, of Nykarleby, who provided the illustration. For a description see "Budkavlen," 1923, No. 1, pp. 5-7.

with a bow in France as early as the thirteenth and fourteenth centuries, and assumes, apparently on very loose grounds and mainly because it is first shown in Agricola's "Musica Instrumentalis," that the "new type of instrument" came into being "between 1511 and 1529, or if it was created *before* 1511, it was at least still so new in that year that it had not yet become generally known."[9]

Both the painting in Häverö Church (*c.* 1500) and the statement of the Icelandic bishop (1484-1550) show that these dates are too late. It cannot be assumed that a totally new type of instrument would have become so widespread in a short time. Mr. Claudius certainly suggests[10] the possibility that a German artist may have had charge of the decorations of Häverö Church and brought with him from his own country the idea for the painting in question, but the probability of this is slight, and appears to be null in the face of the statement that there was at the same date a keyed instrument with a bow in Iceland; and this is an instrument of the kind meant by the bishop quoted above. Whether the passages in the sagas referred to above also mean this instrument is not certain, but if they do, we get a much earlier date, and one not far from the earliest date of the organistrum.

It is clear from what has been said that no definite date can be assigned for the transition from wheel to bow, still less a date as recent as the beginning of the sixteenth century. More than that, the question arises whether such a transition ever took place, whether the bow may not be older than the wheel. If the development from bowed-

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[9] "Om nyckelharpospelet på Skansen," p. 22, f.

[10] Berichte d. I.M.G. Kongress" (Basel), p. 244, Leipzig, 1907.

harp to nyckelharpa could be accepted, it would follow that the use of a bow to stroke the strings preceded that of a wheel,[11] and Mr. Galpin considers this a possibility in view of the incurved sides of the earliest examples.[12] Another consequence would be that bowed instruments with keyboards would be of Scandinavian origin. This conjecture may seem bold, but Mr. Leffler presents it as an alternative, and what has been said above seems to give it support.

Neither the instruments preserved to our day, nor the representations here discussed, have shown us the "harp, giga and fidla" of the literary sources. It has been seen, however, that in many cases the harp of the sagas and lays was taken to be a bowed-harp, and that the Icelandic fidla was a bowed instrument which was probably closely related to the one shown in the carving in Trondhjem Cathedral.

What names were formerly given to the instruments of the bowed-harp type of which we still find traces on Scandinavian soil is nowhere clearly stated. We can only say that the type represented by the Småland instrument was in Ormsö called *talharpa*, and that the Swedes who migrated to Esthonia had probably carried this name with them. The type represented by the Öje instrument,

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[11] It does in any case. See Orpheus fresco in Monastery of Baouït J. Clédat, sixth to eighth century. "Encycl. Brit.," s.v. Bow, p. 339. (Editor.)

[12] "Old English Instruments of Music," p. 103. J. Hoops, in the "Reallexikon der Germanischen Altertumskunde" (III, p. 268, f.) expresses the view that the lira is possibly "that lyre (Dreh-, Bauern-, Bettlerleier), the strings of which were later stroked by a crank wheel.

again, the narrow-holed bowed-harp, has a Finnish name, *jouhikantele*, the Swedish translation of which is *tagelharpa* (horsehair harp), and from this the name talharpa is in all probability derived.

Hülphers says that in the time of Erik XIV (1560) the peasantry used "nyckelgigor och sot-harpor, lång- och knaverharpor"[13]—but unfortunately without giving his authorities. If he is right, one must suppose that the "nyckelgigor" and "knaverharpor" corresponded to the nyckelharpa; it is known that the keys were occasionally called *knavrar*. The "långharpa" may have been something like the Norwegian langleiken, a type not unknown in Sweden. A notice from the parish of Indals, Medelpad, mentions that lång- and knaver-harps were in use at the end of the seventeenth century.[14] But what was meant by the "sotharpa"? If it really was a different type from the "knaverharpa" and "långharpa," it is hardly possible that any other instrument was meant than the narrow-holed bowed-harp—the Öje type. Some of the Carelian instruments in the National Museum in Helsingfors are blackened by smoke and almost polished, and would well deserve the name of "soot harp."[15] The bowed-harp may be directly referred to in a notice from the Dales[16] which says that the bridal procession advanced to the "music of a violin (called a harp)," though it is also possible that the nyckelharpa is here meant.

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[13] "Hist. Avh. om musik och instrumenter," p. 96.

[14] Runa, 1842, I.

[15] On the word harpa, Haqv. Spegel, "Glossarium Sveo-Gothicum," Lund, 1711, says: Harpa är och it wedernamn ut sootharpa. This use of the word supports the above conjecture.

[16] Arosenius, "Beskrifning över provinsen Dalarne," III, p. 29.

This much at least is clear: the word *harp* is used for a bowed instrument, not only as the second member of a compound name, but independently also. As to its origin, etymologists are doubtful. Mr. Fredr. Tamm refers to a homonymous word which occurs in some Romance languages, and means a hook or claw.[17] Mr. R. Meringer and Mr. H. Sperber[18] also discuss the problem, and the former tries to trace the word back to an Indo-Germanic root, *kerb*, "pluck." No final solution has yet been found. Miss Panum concludes from the use of the verb "to harp" that the word originally meant a stringed instrument the strings of which were plucked or "harped,"[19] but this theory falls to the ground, as the same verb was also used to mean playing with a bow.

Prof. Torleiv Hannaas, in his study of the *Hardangerfela*[20] has recently discussed an important Norwegian name for a musical instrument. He tries to discover what instrument is meant in the words "*Haar-Gie* kaldis en Bonde feyle," in Christen Jensøn's "Den Norske Dictionarium eller Glossebog," printed in 1646. He naturally interprets "feyle" as fela, violin, and thinks that the compound word "bondefeyle," peasant violin, suggests that there was also a "byfeyle," town violin. "Gie" is the old Norwegian *gigja*. But then what, he asks, is "Haar"? He finds the answer in a manuscript, "Prøver af et Norsk Dialect-Lexicon," by one Christie, an old

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[17] Tamm, "Etymologisk svensk ordbok."

[18] "Wörter und Sachen," 1912, III, 68, ff.

[19] "Middelalderens Strengeinstrumenter," p. 111.

[20] Hannaas, Torleiv, "Hardingfela." Bergens Museums Aarbok, 1916-17.

diocesan official, who says: "Haarr-gia, haarrgie," a peasant violin, probably derived from *Haar*, from *Hordeland*, and *gia*, a stringed instrument. Prof. Hannaas then develops this conjectural derivation, with special reference to the fact that the peasants near Bergen are called "Horra," and comes to a somewhat surprising result. He says: "I believe that Christen Jensøn's 'Haar-Gie' is the same as has since been called 'hardingfele.'" This would seem a bold interpretation, especially as another one lies ready to hand. Prof. Hannaas considers it impossible to connect the name in question with the word "hair."[21] But why? Is it not probable, rather, that *Haar-Gie*, "hair giga," simply means an instrument with strings of horse or other hair? The name would then correspond exactly to *ta(ge)lharpa* (Finnish *jouhikantele*), which is formed in the same way. Is it not thinkable that *Haar-Gie* may be the Norwegian name for the instrument held by the carved musician in Trondhjem Cathedral, which is, as we have seen, a typical representative of its family, the talharpa family? Prof. Hannaas says that in modern Norwegian *gigje* and *fele* are only two names for one and the same thing, two names for the violin. He believes that the words meant two different instruments in the Middle Ages, but it is by no means proved that this was always the case. The bowed-harp occurs in at least two forms, the one played with the nail technique, the other with keys. Even if in certain cases the one form can be connected with the *harpa* and *fidla*

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[21] Op. cit., page 17.

of the literary sources, and the other with the *sinfon* and *giga*, and although the occurrence of *fidla* and *giga* together in the sagas suggests that the two words denoted different instruments, yet the names of musical instruments seem to have been so indefinite and variable in the north that it is quite possible that the two words were applied to one and the same type of instrument in different places and at different times.

VI.

THE WELSH CRWTH.

THE different views which have been held as to the origin and early history of the crwth have already been summarised in the introduction to this work. The author's Vienna lecture expressed the belief, however, that new light on the problem could be obtained from the Finno-Scandinavian bowed-harp, and Prof. Sachs has since given this opinion his full concurrence.[1]

There is now so much more material available that a better general view of the crwth's history may be obtained, and types and details can be more readily compared. For this purpose, however, it is necessary to understand clearly the position of the crwth in the British Isles.

Among the Celts music and singing were closely connected with the poetic art. The oldest historic sources which mention Ireland speak of the *harp* and *cruit* as the musical instruments of its inhabitants. The Greek historian, Hecatæus, mentions the *harp* in Ireland as early as about B.C. 500, and says that there is in that country a town sacred to Apollo, the citizens of which are nearly all harp players.[2] Another writer, about B.C.

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[1] "Handbuch," p. 158, f.

[2] Grattan Flood, "The Story of the Harp," p. 11.

200, said that the Irish children thought the soul of song dwelt in the vibrating strings of the cruit.[3] Diodorus Siculus, who lived in the first century before our era, said that the Celts had bards who sang to the lyre, praising some, censuring others. (Sunt et apud eos melodiarum poetæ quos appellant bardos. Hi cum organis veluti cum lyra cantant, hos laudantes, alios vituperantes.)[4] Ammianus Marcellinus (fl. A.D. 375) repeats the statement that the bards sang the praises of their heroes to the sweet strains of the lyre.[5]

The bards were originally poets, composers, and singers, and were highly honoured members of society. They played an important part at the great assemblies held in Ireland from time to time, the chief of which was the *Feis*, or Parliament of *Tara*. One of these great meetings, in which more than a thousand bards took part, is mentioned as having taken place in the sixth century after Christ. When the day's work was done, song and music resounded in the hall. The last Feis was held at Tara in A.D. 560, under King Dermot MacFergus, head king of Ireland.[6]

Among the Welsh the bards are found as a separate caste in the same century, and their art was held in great esteem, as the spiritual food of this gifted people. In a sense they were under the protection of the princes, and great public festivals, *Eisteddfod*, were held, at which they competed and prizes were awarded. It is said that

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[3] Op. cit.

[4] Diodorus Siculus, "Rerum antiquarum," Lib. V.

[5] Cf. Galpin, "Old English Instruments of Music," p. 1, f.

[6] Grattan Flood, "The Story of the Harp," p. 26.

at one of these meetings King Cadwaladr (died A.D. 664) issued decrees concerning the poetic art and music. In the ninth century Morgan Hên regulated the bardic system according to the ancient traditions. The Laws of Hywel Dda show that the bards formed an important public institution, that they held different ranks, and that the elder instructed the young. In 1066 Bleddyn ap Cynfyn held a great festival at which numerous regulations were enacted, and at another such gathering, the famous Caerwys meeting, King Gruffydd ap Cynan (died 1137) gave his renowned laws dealing with music and the bardic system. According to these laws, there were definite forms for the musical works to be performed: *cydgerdd*—symphony, *caniad*—song, *gosteg*—prelude. Then came several great bard meetings in relatively quick succession, among them the great festival of 1176, which was especially renowned because of the great competitions then held in harp and crwth playing, and is supposed to mark a date when instrumental music was particularly flourishing.[7] After the conquest of Wales by Edward I, the bards fell into disfavour as being champions of the national culture. But the bardic system was supported by ingrained tradition, and also received the sympathy of some of the English rulers, so that it was still possible to hold similar meetings during the next few centuries. The last assembly of bards, until their revival in our own day, was held in the reign of Queen Elizabeth, in 1568.

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[7] Cf. Wewertem, "Zwei veraltete Musikinstrumente, Monatshefte für Musikgeschichte," 1881, p. 231, f. O'Curry, "Manners and Customs," I, p. 489, III, p. 353.

Ancient Irish literature has frequent references to music, musical instruments, and musicians. The art, and the powerful magic which it wielded, were specially attributed to a mysterious people called *Tuatha Dé Danann*,[8] who, the legends say, came to Ireland "from heaven,"[9] after the Firbolgs in B.C. 1906, and ruled there until 1699, when they were succeeded by the Milesians.[10]

Daghda was the principal god and supreme chief of the *Tuatha Dé Danann*, and his acts and deeds assume enormous proportions in the legends. Above all, he was a master of music and other magic arts, and possessed a wonderful harp. The legend quoted above, about the second battle of Magh Tuircadh,[11] mentions the power of Daghda's harp, and is regarded as the earliest mention of the *cruit*, the Irish national instrument. It records that "Lugh (the *Tuatha Dé Danann* king), and the Daghda (their great chief and druid), and Ogma (their bravest champion) followed the Fomorians, because they had carried off the Daghda's harper, Uaithne was his name. The pursuers reached the banqueting house in which the Fomorian chiefs, Breas, the son of Elathan, and Elathan, the son of Delbath, were, and where they found the harp hanging upon the wall. This was the harp in which the music was spellbound, so that it would not answer when called forth, until the Daghda evoked

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[8] Rolleston, "Myths and Legends of the Celtic Race," p. 119.

[9] Rolleston, op. cit., p. 105.

[10] Macalister, "The Legendary Kings of Ireland." "The Journal of the Royal Society of Antiquaries of Ireland," 1908, p. 4. Macalister tries to show that the legends are more historical than has been thought.

[11] Cf. p. 75.

it, when he said what follows here down: 'Come, Durdabla, come Courcehtairchuir; come Samh; come Gamh (that is, come summer, come winter) from the mouths of the harp, and bellies and pipes. Two names now had the harp; namely, Durdabla and Coircethairchuir. The harp came forth from the wall then, and killed nine persons (in its passage); and it came to the Daghda, and he played for them the three (musical) feats which give distinction to a harper, namely, the Suantraighe (which from its deep murmuring caused sleep); the Gentraighe (which from its merriment caused laughter), and the Goltraighe (which from its melting plaintiveness caused crying). He played them the Goltraighe until their women cried tears. He played them the Gentraighe until their women and youths burst into laughter. He played them the Suantraighe until the entire host fell asleep. It was through that sleep that they (the three champions) escaped from those (the Fomorians) who were desirous to kill them."[12]

O'Curry gives the following explanation of the two names of the harp. *Durdabla* is formed of *durd* or *dord*, "murmuring," and *abla*, "sweet apple tree"; *coircethairchuir* is formed from *coir*, "adjustment," and *cethairchuir*, which can again be divided into *cethair*, "four," and *cor*, "point." The name would thus mean a quadrangular musical instrument.[13]

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[12] A similar story is found in Arabian sources: viz., the "Ikhwān al-Safā'," and by Ibn Khallikān, "Biogr. Dict., III, p. 309, of Al-Fārābī, see Farmer. Proc. Mus. Assoc., 1925-26, p. 107, cf. *ante*, p. 75. (Editor.)

[13] O'Curry, "On the Manners and Customs," III, p. 212, f.

There is a remarkable account of the origin of the cruit in a legend called "Imhreacht na Tromdhaimhe," or the Great Society of Bards. Dallan Forgaill, the chief poet of Erin, died in 592, and the young poet, Seanchan, was then appointed Ollamh. While he was in attendance on the king the following dialogue took place between him and the king's brother, Marbhan. "What art wilt thou display for me, and what is thy name?" said Marbhan. "I am a good Ollamh of Seanchan's in my art," said he, "and my name is Casmael the Cruitire." "I wish to ask thee, Casmael the harper," said Marbhan, "what was it that the cruit was at first derived from; and who it was that composed the first song; and which of them was first invented—the *Cruit*, or the *Timpan*?" "I do not know that, thou prophet of heaven and earth," said Casmael. "I know it," said Marbhan, "and I will tell it to thee. There once lived a couple (a man and his wife). Cuil, the son of Midhuel, was the man, and Canochlach Mhor was his wife. And the wife conceived a hatred to him; and she was (always) flying from him through woods and wildernesses; and he continued to follow her constantly. And one day that the woman came to the sea shore of Camas, and was walking over the strand, she met a skeleton of a whale on the strand, and she heard the sounds of the wind passing through the sinews of the whale on the strand, and she fell asleep from the sounds. And her husband came after her (and found her asleep), and he perceived that it was from the sounds the sleep fell upon her. And he then went forward into the wood, and made the form of the *Cruit*; and he put strings from the sinews

of the whale into it; and that was the first *Cruit* that was ever made."[14]

This story has obviously several features in common with the ancient legends about the origin of the lyre. The Egyptians attributed it to the god Thoth, the Egyptian Hermes, who was walking along the bank of the Nile when his foot struck against a tortoise which had dried up in the sun. The sinews were stretched over the hollow shell, and vibrated. He fastened rams' horns to the tortoise shell and joined them with a cross-piece, and so became the inventor of the lyre.[15] In the Greek myth the inventor of the lyre is Hermes, who slew the oxen of Apollo, and stretched their sinews over the empty shell of a tortoise.[16]

It is not necessary here to discuss the mutual relationship of these legends.[17] It may be noted, however, that the Celtic tradition is more definite than the classical ones, a feature which O'Curry considers characteristic of Celtic legends in general,[18] and that if the myths can be supposed to have a common origin, at least the differences between them point to a long period of separation, which again is evidence of the great age of stringed instruments.

Another point which must here be mentioned is that the Annals of Ulster chronicle under the date 633 the death of "Ailill Cruitire," ancestor of Sil-Dluthaigh.

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[14] O'Curry, "On the Manners and Customs," III, p. 234, f. Cf. J. A. MacCulloch, "Mythology of All Races," III, p. 137.

[15] Rühlmann, "Die Geschichte der Bogeninstrumente," p. 7.

[16] Apollodoros, "Bibliotheca," III, 10, 2.

[17] We return to the Greek legend of Hermes later (p. 264).

[18] O'Curry, "On the Manners and Customs," III, p. 237.

O'Curry says that the word *cruit* means "a sharp, high breast," such as the breast of a goose, a heron, or a curlew. The Gaelic name for the curlew is *crottach*, or "high-breasted."[19] He further quotes a well known writer, Isidor (died 639 A.D.), who states in the "Etymologiarum" that the shape of the kithara originally resembled the breast of a man, because the tones flowed from it like the voice from the human breast. It is said that this was the origin of the instrument's name; in the Doric dialect the word for a breast is *cithara*.[20 & 20a] To this may be added that the Ostyak harp is named "swan," "crane," or "goose," the first name being the principal one,[1] that several Egyptian instruments, of both harp and tanbur type, were ornamented with human heads and necks—the strings taking, as it were, the place of the breast—and that birds' heads were placed on several instruments of the trigonon type.[2]

The name of the ancient Irish harp means the breast of a bird, and the Ostyak harp is also called by bird names—the goose seems to occur in both quarters. There is some probability, therefore, that the instruments may be related. In point of fact, as has already been remarked, there is a close resemblance between the Ostyak harp and the earliest representations of the framed harp in the British Isles, and this fact has given Prof. Sachs an oppor-

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[19] Loc. cit.

[20] O'Curry, op. cit., p. 239. Ref. to Isidor, "Etym.," lib. II, i, 22.

[20a] κίθαρος, and also χέλυς.—(Editor.)

[1] Karjalainen, K. F. "Jugralaisten uskonto," p. 474.

[2] Engel, "The Music of the most Ancient Nations," pp. 182-95.

tunity of combating the theory that Ireland is the original home of the framed harp.[3] Mr. Galpin draws a definite distinction between the "English harp" and the Irish crot or cruit. The crosses on the east coast of England show triangular harps only, whereas the Irish ones show another type of instrument, and from these representations he concludes that the framed harp came from the east, i.e., Scandinavia, at a comparatively late date, while the ancient Irish cruit was a kind of lyre. He enunciates this view with striking confidence: "Greek and Roman writers tell us it was a form of lyre; Celtic records describe it as quadrangular, which the harp is not. Venantius carefully distinguishes it from the harp, which he says was the instrument of the barbarians; and Prof. O'Curry, the greatest Irish savant of the last century, with a perfect knowledge of the ancient Celtic writings and poems, definitely states that the old Irish cruit was a lyre."[4]

The ancient sources give no definite information as to the number of strings on the cruit. There are, however, a few vague hints, as in the legend of Find MacCumhail, Schathach, and her magic harp, which had three strings, one of iron, one of bronze, and a third of silver, and on these grounds Irish writers have asserted that the cruit was originally a small instrument with three or four strings.[5] According to Diodorus, the lyre of the Egyp-

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[3] Sachs, "Handbuch," pp. 231-2.

[4] Galpin, "The Origin of the Clarsech, or Irish Harp." Report of the Fourth Congress of I.M.S., p. 318. (Mr. Galpin seems to shoot beyond his mark. O'Curry has also formulated a theory of close relationship between the Irish *cruit* and the Welsh *telyn*, of which more below.)

[5] Grattan Flood, "The Story of the Harp," p. 8.

tian Hermes also had three strings, which are said to have referred to the three seasons; the highest to the summer, the lowest to the winter, and the middle one to the spring.[6] In the above-quoted legend of Daghda's harp, the druid calls to his instrument with the words: Come summer, come winter. O'Curry thinks that these expressions refer to the musical character, and supposes that something has dropped out; he says there was some connection with the three seasons, in which case it is the spring which has been omitted. But he also thinks it possible that the number three may refer to the three modes, Dorian, Phrygian and Lydian, possibly with some reference to the seasons. He also sees a connection with the three conditions, laughing, weeping and sleeping,[7] which are mentioned in the legend.

The English variants of the ballad of the wonderful harp have already been discussed (p. 158). Several of them regard the instrument as played with a bow, and, like the Scandinavian variants, mention the number three in contexts which suggest that the instrument meant was a three-stringed bowed-harp.

We now come to the authority so often quoted in the first pages of the histories of European stringed instruments, the famous lines from Venantius Fortunatus (A.D. 530-609).

> *Romanusque Lyra plaudat tibi, Barbarus Harpa,*
> *Græcus Achilliaca, Chrotta Britanna canat.*[8]

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[6] Engel, "The Music of the Most Ancient Nations," p. 235.

[7] O'Curry, "On the Manners and Customs," III, p. 212, f.

[8] "Poemata," Lib. VII, Carm. 8; Migne, "Patrol. Sacra," Vol. 88, p. 245.

Students have been much puzzled by this British chrotta, and are to-day still as uncertain as ever what instrument Fortunatus meant, what it was like, and what was its relationship to the ancient Irish *cruit* and the modern Welsh *crwth*.

At the time when Fortunatus wrote the poem in which these lines occur, he was Bishop of Poitiers. For this reason, Miss Schlesinger,[9] Miss Panum,[10] and others, have assumed that he referred to an instrument in use among the Bretons in France, and not the Britons. To this Mr. Galpin replies that it is fundamentally indifferent which people he meant, because the dwellers on each side of the Channel were in close intercourse with each other, and were practically identical in race, language and customs.[11] Even without going quite so far as this, there seems to be justification for connecting the chrotta mentioned by Fortunatus with an instrument in use at the time in Celtic England.

With reference to Fortunatus's lines, Jones says of the crwth: "Its antiquity is such among the Britons that there is every reason to believe it to be a prototype of the violin and all the fidicinal instruments."[12]

Fétis asserts that Fortunatus's chrotta was a bowed instrument, and indeed the first one mentioned in Europe.[13] He enters into controversy with de la Villemarque, who

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[9] Schlesinger, "The Precursors of the Violin Family," p. 495.

[10] Panum, "Middelalderens Strengeinstrumenter," p. 106.

[11] Galpin, "Old English Instruments of Music," p. 3.

[12] "Musical and Poetical Relicks of the Welsh Bards," a New Edition, London, 1794, p. 114.

[13] Fétis, "Histoire Générale," IV, p. 344.

thought that he had identified the instrument as one used by the begging bards of Brittany in the Middle Ages. It is a fundamental error, says Fétis, to confound the crouth, a bowed instrument, with the rotta, which was plucked.[14] Yet Fétis himself seems to be guilty of a certain inconsistency when in one passage he declares the Celtic bard instrument—as shown on the coinage—to be a lyre,[15] and in another conjectures that the Celts of Brittany from whom the coin in question is derived, obtained the three-stringed bowed cruit from the Cymrie, to whom he thinks that Fortunatus referred.[16]

Engel believes that the chrotta meant by Fortunatus was plucked. He notes with a certain satisfaction that Fortunatus does not in any way suggest the use of a bow, and says that there are no grounds for supposing that the bow was known at that date.[17] Both views have received support, but the balance has been in favour of Engel. As was stated above, the discussion has been a good deal obscured by a confusion between the words chrotta and rotta, which has been partly due to their similarity in sound, and partly to the fact that a relationship can be traced between the rotta and the crwth.[18] It would seem,

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[14] Fétis, loc. cit., p. 346.

[15] Fétis, loc. cit., p. 341.

[16] Fétis, loc. cit., p. 344. Fétis thinks the word *crwth* is derived from the Celtic root, *cruisigh*, meaning music, which comes from the Sanskrit *krus'*, to call, make loud sounds.

[17] Engel, "Musical Instruments," p. 93, f. In "The Early History of the Violin Family" (1883), Engel discusses this question with great thoroughness in chapter on the Crwth, pp. 24, *sqq.*, and pp. 65, *sqq.* (Editor.)

[18] Ambros, "Geschichte der Musik," II, p. 34.

however, as if Wewertem had pronounced the verdict on this point. He remarks that Fortunatus was only trying to show the differences between the musical instruments of different peoples, and that by the word *chrotta* he certainly meant the *crwth*. Wewertem adduces evidence that rotta and the crwth were two different instruments, as had, indeed, already been asserted by Fétis.[19] There is no need to quote his argument here, but it has never yet been refuted.[20]

In his book on the "Story of the Harp," Dr. Grattan Flood definitely asserts that "this chrotta or cruit was the name for the oldest form of the Irish harp," and he considers that it is an error to confound Fortunatus's chrotta with the modern Welsh crwth,[1] without, however, producing any convincing proof of the correctness of his view.

It is obvious that in using four different names, Fortunatus was speaking of four different instruments, and therefore, the chrotta mentioned by him can be neither a harp nor a lyre. On the other hand, it is more difficult to say for certain what kind of instrument he did mean to indicate. Dr. Grattan Flood's assertion that he was not referring to the Welsh crwth but to the ancient Irish cruit does not take us far in the absence of any certainty as to what the cruit was like.

Dr. Grattan Flood says that the cruit was originally "plucked with the fingers, subsequently played with a

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[19] Fétis, "A. Stradivari," p. 25.

[20] Wewertem, "Zwei veraltete Musikinstrumente, Monatshefte f. Musikgeschichte," 1881, No. 7, p. 153, f.

[1] Grattan Flood, "The Story of the Harp," p. 9.

bow,"[2] and in so saying he certainly expresses the most general opinion. He says that it was "subsequently" played with a bow in view of the fact that a bowed instrument called *cruit* or *crot* is often represented in carvings and manuscripts between the ninth and thirteenth centuries, but is perhaps also thinking of the alleged connection between the Irish cruit and the Welsh crwth, which latter was still in use in the eighteenth century. If we accept the assumption that the bowed cruit was developed out of the plucked form, a further question arises: when and under what influences did the transition take place?

The assumption is based on the rooted idea mentioned in the introduction that the Celtic cruit was originally a plucked instrument. Miss Panum argues in favour of it that the Irish tradition about its origin is so like the story of the origin of the ancient lyra as to justify one in concluding that its name denotes a stringed instrument the strings of which were plucked.[3] Mr. Galpin seems to share the same view, for in speaking of Giraldus Cambrensis's description of the *chorus*, one of the favourite instruments of the Scots and Welsh, he says that the chorus "was unquestionably the small cruit or crwth as distinct from the larger instrument bearing that name; and whatever may have been the development in Giraldus's day among the Scotch and Welsh, in Ireland and

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[2] Grattan Flood, "A History of Irish Music," p. 22, "The Story of the Harp," p. 8. In the latter passage he says "played with a plectrum or bow."

[3] Panum, "Middelalderens Strengeinstrumenter," p. 107.

England it was already played with a bow."[4] But the difference of opinion which prevails on the point is best shown by Prof. Sachs's statement quoted on page 24.

The writers who suppose Fortunatus's chrotta to have been identical with the ancient Irish cruit and to have denoted a stringed instrument, have tried to identify it

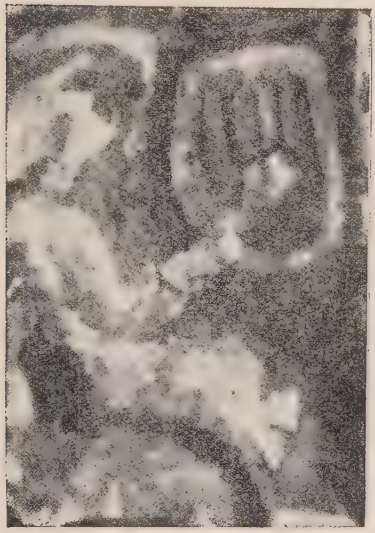

Fig. 67. Cruit on Castledermot Cross, 8th century. From Galpin, "Old English Instruments of Music."

Fig. 68. Cruit on Ullard Cross, 9th century. From Galpin, "Old English Instruments of Music."

with the lyre-like instruments shown on the Irish crosses of the eighth and ninth centuries. Mr. Galpin thinks he has demonstrated that there were two different sizes; the small cruit, the earlier form, he has found on the Castledermot cross, Fig. 67, and the larger one, which came

[4] Galpin, "Old English Instruments of Music," p. 74.

Fig. 69. Alemannic warrior's lyre. Ethnographical Museum, Berlin (6th century).

Fig. 70. Anglo-Saxon round lyre, 8th century, Brit. Mus. MS., Vesp. A. 1. From Galpin, "Old English Instruments of Music."

Fig. 71. Anglo-Saxon round lyre, 8th century. From Westwood, "Palæographia sacra."

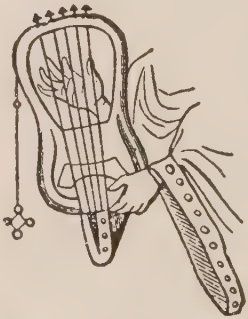

Fig. 72. German round lyre in Gerbert, "De Cantu et Musica Sacra."

into use in the ninth century, on the Ullard cross, Fig. 68. He has made a thorough study of the latter, and by means of a photographic reproduction has finally refuted the writers (English and others) who interpreted it as a framed harp on the ground of an inaccurate drawing.[5]

These instruments are thus not framed harps, so they can best be described as round lyres. The round lyres on the Scandinavian monuments were mentioned in the preceding chapter. Several representations of similar instruments appear in Anglo-Saxon sources as early as the eighth century (Figs. 70, 71), and they can be traced through several succeeding centuries. The same type is found early on German soil, where its most important representation is the instrument in the Berlin Ethnographical Museum, called the Alemannic warrior lyre, from about the middle of the first millennium of our era. Gerbert shows a still more typical example, though one of considerably later date (Fig. 72). Miss Panum illustrates several others, which are also similar.[6]

"All these types seem to have been plucked," says Prof. Sachs.[7] He thus still leaves open the original character of the instrument, and the present writer adopts the same attitude—at least for the present. These round lyres certainly do seem to represent quite an independent type, especially as they appear in the later representations. And yet they obviously have many points of contact with the

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[5] Galpin, "The Origin of the Clarsech," Report of the Fourth Congress of the I.M.S., p. 318, f.

[6] "Middelalderens Strengeinstrumenter," p. 80, ff.

[7] "Handbuch," p. 159.

bowed-harp—indeed, one could even imagine the round lyre being descended from the bowed-harp.

No such derivation is attempted here, because the round lyres lack that most important attribute of the bowed-harp, the bow. Attention is only called to a similarity in form and construction; particularly striking is the almost complete resemblance between the round lyre and the wide-holed bowed-harp in regard to the placing of the strings. In both instruments the bridge has exactly the same position—and its mere presence is usually regarded as a sign of a bowed instrument. The representations of the round lyre leave the method of playing it problematical.[8] The absence of the bow need not necessarily prove that the strings were plucked. The artist may simply have omitted the bow—that is often done even in representing fiddles. And if the picture of the talharpa in Ormsö, to take an example, be imagined with the bow left out, it would be exceedingly easy to connect the instrument there shown with the earlier representations of round lyres. The most important point, however, is that, as will be found later, typical round lyres are also shown with bows (in the Kloster Neuburg manuscript). Moreover, no decisive argument can be drawn from the relatively large number of strings (five or six), as bowed instruments are shown with no less, for instance, in the stone carving of an Irish bowed cruit from Church Island (Fig. 91). There is yet another bowed cruit which can be quoted in comparing the round lyre with the bowed-harp, namely, that reproduced by Mr. Galpin from an

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[8] But see Figs. 70, 71 and 72, in which the player is shown plucking the strings, also p. 227. (Editor.)

eleventh century Anglo-Saxon psalter. But perhaps this is more closely related to the bowed instruments which are considered more fully below.

The round lyre can thus not unreservedly be assumed to have been a plucked instrument derived from the ancient lyre. On the other hand, neither is it possible to state positively that the round lyres were bowed-harps. For one thing, we here come up against the Ostyak naresjux, an instrument of characteristically plucked type,

Fig. 73. Bowed cruit in an Anglo-Saxon Psalter at Cambridge. Beginning of the eleventh century. From Galpin, "Old English Instruments of Music," p. 193.

which can be connected at least with certain details found in the round lyres. At this point the student is forced to halt and await developments.

Whereas the information we have about the ancient Irish cruit, as has been seen, is under all circumstances vague and uncertain, in Wales we are on firm ground—at least for a time. The conflicting opinions held as to the character and earliest forms of the Welsh crwth have

already been mentioned. Let us now see what can be gained from a renewed study of this instrument.

The history of the crwth may be divided into two periods, the former of which comes down about as far as the fourteenth century, while the latter extends from that date till the middle of the nineteenth century. The material for the former period consists chiefly of sculptures and illustrations in manuscripts, plus the mediæval literary sources. For the latter period there is similar material, and also actual specimens of the instrument which have been preserved to our own day. In the earlier period there is a great variety of forms, but we may be justified in taking the *three-stringed crwth* as the prevailing instrument. In the latter the *six-stringed crwth* holds the field almost alone.

The safest point of departure for a study of this instrument is the *six-stringed modern crwth.*

As the instruments show more or less clearly, the crwth is an oblong instrument with a flat back, sides (ribs), and soundboard. Fétis gives the following measurements: length, 57 cm., greatest breadth, 27 cm., and depth, 5 cm.[9] Its most important characteristic is the square hole at the upper end, which is divided into two by the finger-board; that is how the present writer prefers to describe it; most authors speak of the holes on each side of the finger-board. It has six strings, four stretched over the finger-board and two outside it to the right. It is played with a bow, and is held in much the same position as a violin.

This instrument first became known to the learned world on May 3, 1770, when Daines Barrington gave, before the

[9] "A. Stradivari," p. 18.

London Society of Antiquaries, an address on it, which was afterwards published in "Archæologia."[10] Barrington had heard the crwth played by one John Morgan, who was born in Anglesea in 1711. He had had an opportunity of seeing and examining it, so that his account must be regarded as trustworthy. It was next described in

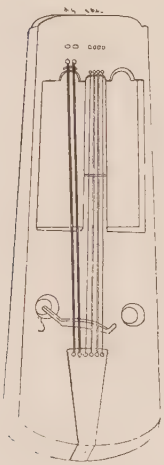

Fig. 74 Crwth drawn by Daines Barrington in 1770. From Rühlmann, "Die Geschichte der Bogeninstrumente."

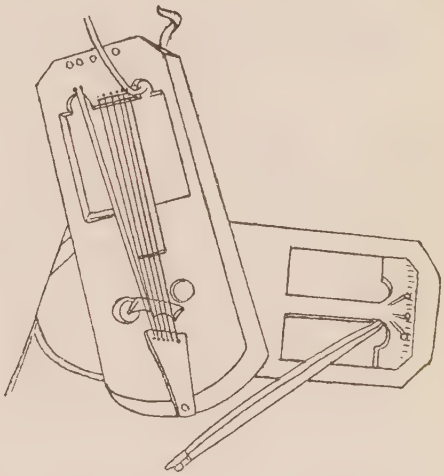

Fig. 75. Crwth shown by E. Jones, 1784. From Rühlmann, "Die Geschichte der Bogeninstrumente."

1784 by Edward Jones, who said that at that date it was very rare in Wales.[11] As late as 1800, however, W. Bingley met in Caernavon a man who played various national melodies to him on a crwth, as he describes in his account

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[10] "Archæologia, or Miscellaneous Tracts Relating to Antiquity"; published by the Society of Antiquaries of London, Vol. III, p. 32, 1775.

[11] Jones, "Musical and Poetical Relicks of the Welsh Bards," London, 1784, p. 42.

of a tour round North Wales.[12] It was in use among the Welsh peasantry even up to the middle of the nineteenth century, at least, so Mr. Galpin concludes from a story "told of one James Green, shoemaker, of Bronygarth, who died in 1855, that on the way to a festive gathering he encountered in a narrow lane an infuriated bull; hastily climbing into a tree, he hoped to escape the attack, but the animal, determined not to lose his man, took up a position beneath the branches. The little shoemaker, though grateful enough for his safety, regretfully thought of the merry evening he had lost; so at last he determined to try the effect of music on the expectant beast. Taking his crwth out of his bag, he struck up a favourite air. To his surprise the animal turned and fled. 'Stop, stop!' cried James, his wounded pride quite overcoming his fears, 'I'll change the tune.' It was, however, too late, and for the first time the music of the last of the crwth players had failed to please."[13] It does not appear what evidence Mr. Galpin has that the instrument in question really was a crwth. It may as well have been a violin, which is occasionally called a *crowd* even in modern English.[14]

There is a general agreement between the various descriptions and illustrations of the crwth, which seems to show that there was only one current type, which underwent but little change during the eighteenth century.

The crwth shown in Fig. 76, an illustration borrowed from Mr. Galpin's book, was made during last century

[12] Bingley, W., "Tour Round North Wales," London, 1800, Vol. II, p. 280, ff.

[13] Galpin, "Old English Instruments of Music," p. 77, f.

[14] Schad, "Musik und Musikausdrucke," p. 70.

by one Owain Tyddwr, an old man from Dolgelly, who remembered the instrument as it was when he was young, and took great interest in helping to reconstruct it.[15] Apparently the only specimen now existing in Wales is that shown in Fig. 77, which is preserved in the Welsh National Library at Aberystwyth.[16] As may be seen from the illus-

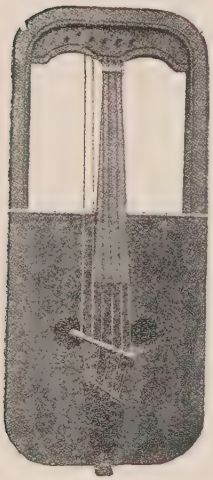

Fig. 76. Crwth. From Galpin, "Old English Instruments of Music."

Fig. 77. Crwth in the National Library, Aberystwyth.

Fig. 78. Crwth of unknown origin. From Schlosser.

tration, this instrument has no bridge, and the string-holder seems to have been adjusted by somebody who lacked knowledge, for the cords which hold it are too long. Fig. 78 shows an example which differs considerably from the other two. The utmost pains have been

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[15] Galpin, "Old English Instruments of Music," p. 78.

[16] The illustration is from a photograph obtained in 1913 through the courtesy of the librarian, Mr. John Ballinger.

taken over its artistic decoration. The finger-board is so narrow that one of the four playing strings appears outside it. Mr. Schlosser says that the original is of "unknown provenance," which fact is the more regrettable in view of its unique characteristics.[17]

One crwth dated 1742, of which several copies have been made, is preserved in the South Kensington (Victoria and Albert) Museum, London,[18] and another in the Corporation Museum, Warrington. These are practically alike, and similar to Fig. 76. The latter, when seen by the author in 1913, lacked string-holder and finger-board.[19] The extreme rarity of genuine crwths is shown by the fact that the Welsh National Museum in Cardiff only possesses a copy of the South Kensington instrument.[20] Nothing is known—beyond the tale related above—of any crwth having been in use in our own day, although, as Mr. Galpin says, one may yet be concealed among the rural population of Wales, far from the beaten

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[17] Schlosser, "Katalog.," p. 33.

[18] Kinsky calls this instrument "the only genuine specimen yet discovered" ("Katalog," II, p. 372), but, as appears below, this description is not accurate.

[19] The author's visit to Warrington was prompted by Mr. Galpin's statement (op. cit. p. 78) that this specimen had no finger-board; which could be taken to indicate some variation from the known type of crwth. The finger-board was, in fact, missing, but the neck remained.

[20] The curator of the museum, Mr. Wm. Evans Hoyle, was good enough to give me this information in a letter dated May 17, 1913. At the same time he said that the only specimens known to him were that at Warrington and the one in the National Library at Aberystwyth, which belongs to Sir John Williams.

track.[1] Most of the important collections of musical instruments possess copies.

No information seems to be available as to the kinds of wood from which these instruments are made.[2] The dimensions given vary to some extent. The statement that two different sizes were in use during the period under consideration has, however, found no corroboration, and it is not clear why certain representations of the instrument have been so made as to suggest an unusually large size.[3] The measurements given above may be regarded as normal, in which case the crwth would be of about the same size as a violin.

The crwth may be regarded as consisting of two parts, the resonator, and the upper part by which it is held.[4] The characteristics of the resonator are its oblong, angular shape (the two lower corners are somewhat rounded), flat back, and straight sides, features which differentiate it from most of the older bowed instruments. Whether its actual outline has undergone any change during the period under review is unknown, but its back was formerly rounded, though one cannot say for certain whether it was trough-shaped or bowl-shaped. Edward Jones gives

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[1] Galpin, "Old English Instruments of Music," p. 78.

[2] Unfortunately the author omitted to investigate this detail when visiting England in 1913.

[3] Cf. Rühlmann, "Die Geschichte d. Bogeninstr.," p. 101.

[4] The division adopted here, as in the case of the Finnish bowed-harps, differs from that of Rühlmann (loc. cit., p. 96), who says: "Die Decke erscheint nun sorgfältig gesondert; in einen *Hauptteil* mit Steg, Schallöchern und Saitenhalter; in einen *mittleren*, in welchem sich die Oeffnungen für die Arme und das Griffbrett befinden, und in den kleinen, verjüngten Obertheil, in welchem sowohl die Saiten als das Griffbrett ihre Befestigung haben."

a metrical description of the crwth, quoted by Fétis, which is said to have been composed in the fifteenth century by a Welsh bard, Gruffydd ab Davydd ab Howel, and says "the bulging of its back is somewhat like an old man."[5] This comparison is doubtless just as trustworthy as the eighteenth century drawings, which seem to indicate a flat back, but it is impossible to say when and under what

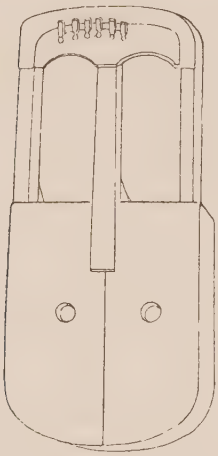

Fig. 79. Crwth belonging to Ch. W. G. Wynne. From Sandys and Forster, "The History of the Violin."

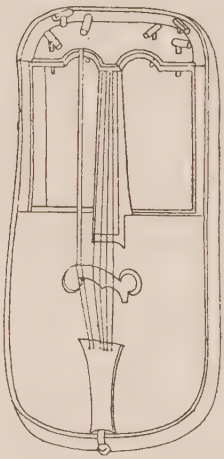

Fig. 80. Crwth in Leland's "Collectanea." From Rühlmann, "Die Geschichte der Bogeninstrumente."

influences the shape of the back changed from rounded to flat. A similar evolution has already been observed in the bowed-harps from Finland and Swedish Esthonia.

In all the specimens known, and all representations from the period under consideration, there are two circular sound-holes in the sound-board. The Welsh poem just quoted has a line "and from its centre it winds in a ring."

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[5] "A. Stradivari," p. 17, f.

The author is not aware of any explanation of this line, but it is at least conceivable that it referred to a circular hole in the middle of the sound-board. If this guess were correct, the hole would be in about the same position as that in the Finnish bowed-harp shown in Fig. 21, which also is of about the same size as the crwth's sound-holes. A crwth with only one sound-hole is not anywhere represented, neither is there any means of determining when the two round holes first came into use. The method of fastening the soundboard to the resonator is nowhere stated. The poem already quoted mentions a "girdle"—its first words are: "A fair coffer with a bow, a girdle"—this might possibly refer to something akin to the band of birch bark in the Carelian bowed-harps. As has been shown, this cannot originallly have had any other function than to keep the soundboard on the resonator.

The most characteristic features of the crwth are found in the upper part. The straight sides are prolonged upwards to form arms, which are united by a yoke, these together forming a framework round the hand-hole, which again is divided into two by the neck, the finger-board. The illustrations of actual instruments show certain variations in the sides which, though not great, are worth mentioning. In Barrington's illustration of John Morgan's crwth, and also in the illustrations given by Jones, the sides seem to lie in the same plane as the back and sound-board, and to form a continuation of the sides of the resonator in the same straight line. The pictures almost suggest a hand-hole carved out of the piece that forms the back. The last two features, at least, are also found in the Vienna specimen. In the Aberystwyth instrument,

and that illustrated in Leland's "Collectanea," the sides of the hand-hole seem to be in a rather lower plane than the soundboard. This is certainly the case in the instrument belonging to Mr. Ch. W. G. Wynne shown by Sandys and Forster, in which the whole upper part is also rather narrower than the resonating body. This crwth recalls the Swedish four-stringed bowed-harp shown in Fig. 53.

In Barrington's and Jones's reproductions the yoke seems to consist of a single piece lying in the same plane with the soundboard, as do also the sides of the finger-board. As far as can be seen from the photograph, the Aberystwyth crwth has the same form. But in the other illustrations, and in Mr. Galpin's instrument, the outer framework surrounds a little slab of wood in which the pegs are inserted. This is thinner than the rest, and curved in an arch on each side of the finger-board. The outline of the frame varies. As a rule the corners are evenly rounded, but in Jones's illustrations they are cut off in an obtuse angle, and in the Vienna specimen they are almost pointed. For the rest, the yoke of this instrument is rather eccentric, and scarcely to be explained otherwise than as a whim of the maker. A remarkable variation in the Aberystwyth example is that the curve upwards is more marked on the left-hand side of the finger-board than on the right.

The fifteenth century poem cited above gives a hint of the outline of the yoke in the line, "it has a frontlet formed like a wheel." It does not seem possible to apply this expression to any other part of a crwth, but if it refers to the yoke, it only indicates that the frame was then rather more strongly rounded.

As already stated, the hand-hole is divided into two by the finger-board. This generally lies on a neck which is fastened to the resonator and peg piece, but frequently extends below the neck, stretching some way over the resonating body. In all probability the neck is original. In John Morgan's instrument, as shown in Barrington's drawing, the neck itself seems to have served as finger-board, and there is no indication of any extension downwards. The finger-board gradually becomes more distinct. In three cases (the instruments shown by Leland, Sandys and Forster, and Schlosser) it is so narrow as scarcely to serve its purpose as support for four strings. Rühlmann regards this fact as a sign of degeneration,[6] but there seem to be no real grounds for his assumption. On the contrary, the present writer regards the narrow finger-board as a sign of an earlier phase of evolution, when it is possible that the neck and finger-board may have had the same character as the centre-piece in the two-holed bowed-harps. This view gains support from the fact that the crwth with the narrowest finger-board of all, that shown by Forster, is also probably the oldest known specimen from the period under consideration. It is signed by Richard Evans, an instrument maker, and dated 1742, but Forster notes that it is fragile and worm-eaten, and obviously older than that date, which he therefore regards as only giving the year of some repair. However this may be, the later crwths, most of which are perhaps reconstructions like that shown by Mr. Galpin, have fully developed finger-boards resembling the finger-board of a violin.

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[6] "Die Geschichte der Bogeninstrumente," p. 97.

The bridge, stringholder, strings, pegs, and mode of tuning still remain to be investigated. The bridge has been considered one of the most characteristic features of the crwth. According to Jones's description, it is rather more curved upwards than the bridge of more modern bowed instruments. One foot is about seven centimetres long, and extends right through the right hand sound-hole to the back, while the other foot, about two centimetres long, rests on the soundboard beside the other sound-hole. Thus the bridge acts as a sound post as well. It is placed diagonally to the strings, as may be seen from Barrington's and Jones's drawings, where the peculiar arrangement is clearly shown. How long this bridge has been in use, and whether its curious form was due to some chance or to an organic necessity, cannot be determined. Jones thinks that it is very ancient, but there is no evidence of its use before the period under discussion.

There is not much to say about the string-holder. In general it resembles that of the violin, but it is sometimes cut diagonally across the top, probably influenced by the diagonal position of the bridge. It is fastened to the rib at the bottom by cords or bands, with a button resembling that of a violin.

During the period here in question the crwth had six strings, the names of which were as follows:[7]

1. Y Cras-dant	The harp string
2. A'i Fyrdon	And its bass
3. Byrdon y Llorf-dant	Accompaniment to the bass string
4. Y Llorf-dant	The bass string
5. Y Cywar-dant	The keynote
6. A'i Fyrdon	And its bass.

[7] Jones, Edward, "Musical and Poetical Relicks of the Welsh Bards," London, 1784, p. 42

Jones says expressly that "two or three of the lower strings of the crwth are often struck with the thumb, and serve as a bass accompaniment to the notes sounded with the bow." The common view that the two lowest strings were always plucked, which perhaps owes its general acceptance to Fétis,[8] is thus not quite accurate. Several investigators have been puzzled about the way in which the strings were fastened to the pegs. In Barrington's drawing their upper ends seem to be fastened round small pegs. Jones does not express himself quite clearly. He says that the strings are passed through holes bored in the massive part of the instrument and wound round the pegs. As a matter of fact, this description is quite intelligible, especially when one has seen a crwth, in spite of the incomprehensible zeal with which Rühlmann, after careful examination of this detail in every illustration, tries to prove that the drawings are wrong and lead to impossible consequences. At the upper end of the finger-board the strings are carried through the peg-piece, and then fastened at the back to the pegs, which are put in from the front (anterior). These pegs are in a few cases arranged in a straight line, sometimes in a curve or in groups of three on each side, as in Fig. 80. There is no getting away from these facts, and Rühlmann's effort to explain the impossibility of this arrangement is obviously wasted trouble.[9]

Barrington and Jones give the following tuning for the six-stringed crwth:

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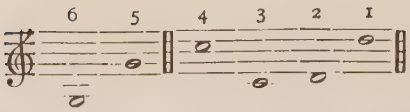
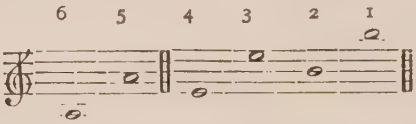
[8] "A. Stradivari," p. 24.

[9] "Die Geschichte der Bogeninstrumente," p. 97, f.



Bingley subsequently observed a different tuning, viz.:[10]



Mr. Galpin rightly notes that this arrangement suggests that the instrument was used for accompaniment rather than for melody.[11] Bingley, however, had heard melodies played on it. He says that the musician played to him several national airs He was not much attracted by the tone of the instrument, which was harsh and unpleasant, but this he ascribes to the player's lack of skill. He says that when it was accompanied by the harp, on the other hand, its tone was very soft.[12]

Mr. Fleischer points out the analogy between the tuning of the crwth and the oldest tuning of the Grecian lyre, which, if the lowest note was G or E, was tuned thus: G C^1 D^1 G^1 (E A B E^1).[13] The Carelian tuning of the bowed-harp may also be compared, but the significance of these analogies cannot be discussed here.[14]

Throughout this period the crwth does not seem to have suffered any important change. It is always the six-stringed, modern crwth, though seldom mentioned, and

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[10] Bingley, op. cit., p. 280, f.

[11] Galpin, "Old English Instruments of Music," p. 77.

[12] Bingley, op. cit., p. 280, f.

[13] Fleischer, "Musikinstrumente aus deutscher Urzeit," Allgemeine Musikzeitung, 1893, pp. 30-33.

[14] Cf p. 68.

the few instances known are mostly drawings or reconstructions. Outside Wales it is wholly unknown.

We now come to the earlier period, the *forerunners of the crwth*, a time from which no actual specimens survive. We have thus to depend wholly on representations and literary sources.

The sculptures and drawings range from the ninth to the fourteenth centuries. The author cannot *a priori* admit that there has during this time been a "transition" from plucked to bowed technique, and therefore cannot either give the chief prominence to features of purely typological character. A sharp line is therefore drawn to begin with between instruments which resemble the crwth in type only, and those which appear to be the forerunners of the crwth in both type and technique, i.e., those which have at least some suggestion of that necessary attribute of a bowed instrument, the bow.

Instruments of the former kind first appear in the ninth century, the earliest instance being an illustration in a ninth century manuscript, the Bible of Charles the Bald, preserved in the Paris National Library (Fig. 81). Miss Schlesinger describes how this instrument is shown in the MS. in the hands of a musician who stops the strings on the fingerboard of the instrument with the left hand and plucks them with the right, and on that ground she classifies it as transitional between the kithara and the Welsh crwth.[16]

In this same group must be included a Saxon sculpture of the twelfth century from the Golden Gate at

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[16] Schlesinger, op. cit., p. 337, and "Encycl. Brit.," Vol. VII, p. 513.

Freiberg, Fig. 82, and likewise a similar contemporary sculpture over the altar of the castle chapel at Wechselberg. These two carvings have a general resemblance, but the Wechselberg one shows the instrument with a bridge, which the Freiberg one does not. Both instruments have finger-boards—Wewertem uses that term—

Fig. 81. Crwth in the Bible of Charles the Bald, 9th century. Drawn from a plate in Aug. de Bastard's "Peintures et Ornements de la Bible de Charles le Chauve." ("Encyc. Brit.," s.v. "Crowd." Vol. VII., p. 513).

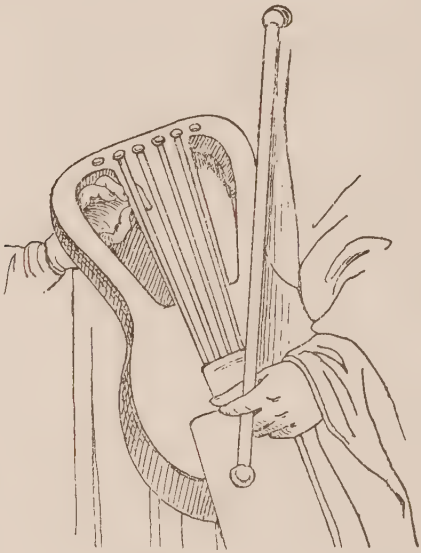

Fig. 82. Carving on the Golden Gate, Freiberg, 12th century. From Rühlmann, "Die Geschichte der Bogeninstrumente."

stringholders, and six strings. Their form recalls that of other instruments already described; a resonating body with incurved sides and rounded at the bottom. There are four strings running over the finger-board, but two more pegs, one to the right and one to the left of it, suggest that there were also two bourdons. Wewertem believes that "the sculptor was thinking of the two bour-

dons of the crwth, although he did not remember their position." Here, as in regard to other similar forms of instruments found on the Continent, Wewertem assumes a Celtic influence.[18] Even if one shares this view in general, it may yet be questioned whether there is any justification for assuming influence from a six-stringed crwth at this early period.

Fig. 83. Instrument on the Durrow Cross. From Panum, "Middelalderens Strengeinstrumenter," p. 103; or after Margaret Stokes' "The High Crosses of Castledermot and Durrow," 1898.

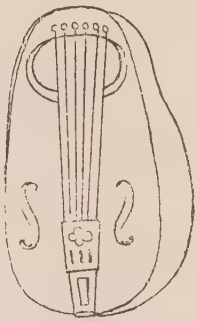

Fig. 84. Instrument in Amiens Cathedral, 13th century. From Rühlmann, "Die Geschichte der Bogeninstrumente."

Turning now to instruments which either certainly were, or can with great probability be supposed to have been played with a bow, we may classify these into three groups: (1) instruments with no finger-board, (2) those on which the existence of a finger-board cannot with certainty be ascertained, and (3) those with a visible finger-board, or at least a centre piece.

The Durrow Cross, an Irish cross from some time between 860 and 990 A.D., probably gives the oldest repre-

[18] Wewertem, op. cit., p. 239.

sentation of an instrument belonging to the first class, although the carving is not very distinct. Dr. Grattan Flood explains this instrument as "a six-stringed cruit with bridge and bow," and adds that it is an advanced form of the cruit, the instrument so popular in Ireland in pre-Christian and early Christian times.[19]

The illustration is taken from Miss Stokes's reconstruction in "The High Crosses of Castledermot and Durrow," and does not show the bow. Dr. Grattan Flood does not state his reason for regarding the instrument as bowed, but as he seems in general to favour a comparatively late "transition" from plucked to bowed instruments, his opinion on this point has some weight. The conjecture that the carving represents a bowed cruit gains added probability from the facts that the instrument has a bridge, and shows some resemblance to a bowed-harp.

A carving in Amiens Cathedral shows an instrument with a hand-hole and six strings which has been interpreted in various ways. Fétis refuses to regard it as a crwth, because it has no finger-board. On this Rühlmann remarks: "We know, however, that the only certain touchstone of a bowed instrument is the string-holder,[20] which necessarily indicates a bow. *This the sculpture has.*" The present author shares Rühlmann's opinion the more readily, as it is further supported by the two S-shaped sound-holes, while in the light of the bowed-harp, Fétis's remark about the absence of a finger-board loses any significance it may once have had.

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[19] Grattan Flood, "The Story of the Harp," p. 29. See Panum, op. cit., p. 103; and also Galpin, op. cit., p. 76, lines 6 and 7. The sculpture shows a sword which may have been mistaken for a bow. (Editor.)

[20] Rühlmann, op. cit., p. 91.

The most typical instance of a bowed instrument without a finger-board occurs in a manuscript found, not in the British Isles, but at Kloster Neuburg, near Vienna. This is a prayer book which is said to have belonged to St. Leopold (1073-1136), and contains a drawing of King David surrounded by his musicians (two figures holding different instruments have been omitted in the illustration, Fig. 85). Rühlmann, who closely follows Wewertem in his account of the crwth, thinks that these drawings afford evidence that the crwth was already known in three different sizes at the date of the manuscript. He supposes that the instrument shown on King David's right had two strings, and the one to the left three. "The third biggest instrument in this manuscript, the one placed in the hands of King David, ... is to be regarded as a six-stringed, bardic crwth."[1] It is clear that the instrument to the right has two strings, but as there is no evidence as to the number of strings on the two others, there is nothing whatever to go upon. Moreover, it seems bold to say that the three instruments are of different sizes, and the statement that the one held by King David is the biggest is clearly erroneous. Measurements made on the drawings, comparing the size of the instruments with that of the body, give the following results, which are naturally very rough; the instrument to the right of the central figure is about fifty centimetres long (the length from knee to ankle), and fourteen centimetres wide (one and a half hand spans); that in the middle is fifty-three centimetres long (from the knee, which is

[1] Rühlmann, op. cit., p. 92, f.

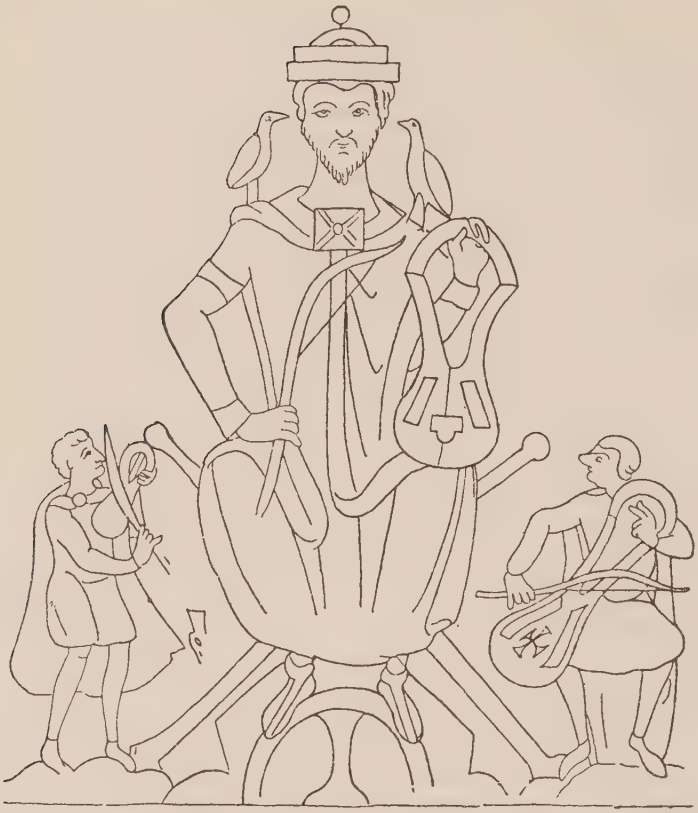

Fig. 85. Drawing from the Kloster Neuburg manuscript, 11th century. From Rühlmann, "Die Geschichte der Bogeninstrumente."

roughly at a right angle to the body, to the shoulder), and twenty centimetres wide (from the middle of the brooch to the shoulder); the one to the left is ninety-four centimetres long (ankle to shoulder when sitting) and thirty centimetres wide (elbow to wrist). If these measurements be taken on a person of average stature, the difference between the two smaller instruments is so slight

that it may be quite accidental, and it would therefore seem that only two sizes are intended.

All three instruments are alike in having both the yoke and the lower end of the resonator rounded. The sound-holes visible on two of them—oblong in the one case, and both oblong and cruciform in the other—prove that the instruments did not consist simply of a flat board with a hole cut in it, but possessed true resonating bodies, with flat or rounded backs, incurved sides, and soundboards. But both King David and the musician to his left have instruments in which the resonator occupies less than half the total length, an acoustically unfavourable proportion. The right-hand one, which Wewertem in one passage calls the original crwth,[2] appears to be better proportioned, but it probably is of the same kind as the one held by the King, although the draughtsman has turned it back to front, and could not make the details clear owing to the smallness of the figure.

The intention seems to have been to show the two side figures actually playing, but the drawings afford no data from which to determine the nature of the technique. As no fingerboards are shown, the strings must have been stopped simply by the touch of the fingers, probably the nails or upper surface, a technique similar to that employed in playing the bowed-harp. If it be assumed that the musician standing up has turned the back of his instrument towards the spectator, his left hand is holding it just as if it were a bowed-harp. Its position is certainly not the same as that of the bowed-harp when being

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[2] Wewertem, op. cit., p. 233, f.

played, but this may be due to the draughtsman's lack of musical knowledge. In dealing with mediæval drawings one has always to allow for a certain amount of inaccuracy.[3] The musician sitting beside the throne holds his instrument very much like the bowed-harp. In any case, his left hand must be wrongly drawn, but the position of the two fingers does seem to suggest the bowed-harp technique.

Musical investigators have given these drawings somewhat summary treatment. Both Miss Schlesinger and Mr. Galpin share Rühlmann's view that instruments of three different sizes are represented. Miss Schlesinger speaks of them as rottas, and expresses the opinion that the waist formed by the incurved sides "was not made to facilitate the bowing, but was simply reminiscent of the cithara or lyre in its most elegant forms.[4] Mr. Galpin only mentions the drawings as showing an interesting group of musicians playing bowed cruits.[5] Neither writer makes any attempt to explain the presence of the bow in the absence of a fingerboard. The present writer believes that these instruments are to be regarded as wide-holed bowed-harps.

We come now to the second group, representations of instruments which have been variously interpreted as having or not having a finger-board or neck. The most important of these is the much discussed drawing in a manuscript from the monastery of St. Martial de Limoges, in the south of France (Fig. 86), now in the Paris Biblio-

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[3] Cf. Schlesinger, op. cit., pp. 339-40.

[4] Schlesinger, op. cit., 1, 340, and p. 339, foot-note.

[5] Galpin, "Old English Instruments of Music," p. 75.

thèque Nationale, Latin MSS., No. 1118. Fétis ascribes this manuscript to the eleventh century. Wewertem and Rühlmann regard the drawing as of extraordinary importance, as being the only known instance of a three-

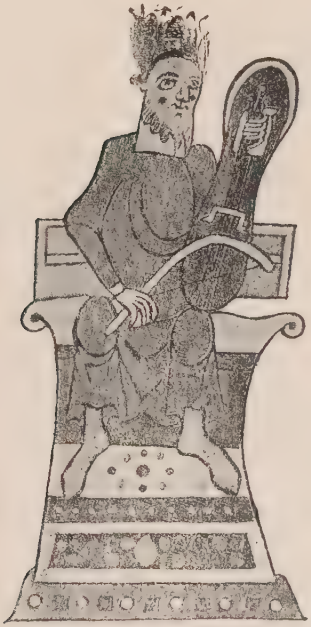

Fig. 86. Miniature from St. Martial de Limoges, 11th century. From the original drawing in the Bibliothèque Nationale, Paris.

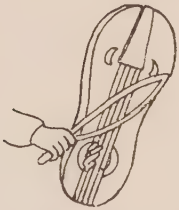

Fig. 87. Bowed instrument in Worcester Cathedral. 13th century. From Rühlmann, "Die Geschichte der Bogeninstrumente." Cf. Schlesinger "Precursors," p. 256.

stringed crwth. Its significance is in no way lessened by the fact that at least one other is now known, and will be described below.

The drawing shows a long instrument, which appears to have a hollow resonating body, slightly incurved sides, hand-hole, three strings, bridge and bow. The incurva-

tion of the sides has been taken to indicate ribs.[6] The shape of the resonating body rather suggests that the back was rounded, but there is no certain evidence that this was so. The hand-hole is the most important feature. It has been thought that this hole is divided by a fingerboard, and on this ground the instrument has been regarded as the forerunner of the crwth, thus giving rise to the generally accepted view that the modern, six-stringed crwth was preceded by one with three strings, a type named by Fétis *crouth trithant*.[7] Wewertem says that he has not found this name anywhere in the ancient sources, neither has he found Welsh representations of such an instrument, nor even a hint of its existence in Wales.[8] "It is, however, a fact," he writes, "that the Limoges manuscript does show one of those rare features which are characteristic of these instruments, namely, a square opening in the upper end of the soundboard through which the hand was passed, which thus, in a primitive manner, made up for the absence of a neck. This shows that the want had been felt and an attempt made to remedy it; it therefore indicates that the instrument had reached a more advanced stage of development, and is consequently later in date, than the three shown in the Kloster Neuburg manuscript. On the side where this improvised neck is to be grasped by the thumb and first

[6] Rühlmann, op. cit., p. 92.

[7] Fétis, "Anthony Stradivari," p. 14.

[8] Wewertem seems not to have noticed Jones's use of the name. Cf. p. 240.

finger, the opening—with equal *naïveté* and ingeniousness—is only made so far rectangular as to allow the latter finger room to move."[9]

When Wewertem here speaks of "a square opening in the upper end of the soundboard" and "the absence of a neck," he apparently regards the hand-hole as clear, not divided by a neck. Later, however, he speaks of the "improvised neck," so that his views on this detail are rather obscure. But the way in which he compares this instrument with the sculptures in Worcester and Amiens Cathedrals shows that he finally regarded the hand-hole in the Limoges drawing as one and undivided. Of the authors who hold that the instrument in this drawing has a finger-board, Mr. Kinsky takes the most extreme view. He had an instrument made in the Heyer Museum from Fétis's illustration (shown in Fig. 86), and had it made eighty centimetres long and twenty-one centimetres wide, with a finger-board and two fairly inconvenient hand-holes.[10] Quite apart from the fact that the addition of a finger-board is very arbitrary, the whole reconstruction strikes one as a failure. The dimensions are obviously excessive, for a measurement of the instrument of the drawing and a comparison with the size of the whole figure suggests that it was about seventy centimetres long. There is no justification whatever for adding the bridge which is characteristic of the modern crwth. About the bridge Wewertem remarks: "The only thing that seems certain is that it was introduced within this period of five hundred years, for it

[9] Wewertem, op. cit., p. 228.

[10] Kinsky, "Katalog," II, p. 371, f., and illustration on p. 377.

is lacking in all representations before the thirteenth century, and present in those of the eighteenth and nineteenth."[11]

The Limoges drawing is indistinct, and it is hard to say whether there is a finger-board or not on the instrument there shown. It *may* have a finger-board, but on the other hand there is also a possibility that it has not. In the latter case the draughtsman has made a mistake as to the position of the left hand, which ought to have been shown on the right side of the strings and not the left. It is the easier to assume such an error as the bow is also badly drawn. It is only supported, not held, by the right hand, and seems to touch the strings below the bridge, at the lower end of the instrument, whereas it must naturally have touched them above the bridge. Mr. Volbach certainly takes the position of the bow to be correctly drawn, and says that the manuscript "shows us clearly the position and manner of playing." "The musician passes one hand through the opening and presses the strings down, thus increasing their tension," and for this reason the bow makes its "attack" below the bridge.[12] But this theory collapses from its sheer intenability. Even if the technique assumed by Mr. Volbach had been used in playing the Allemannic warrior's lyre, which is also open to doubt, it is practically impossible on so small an instrument as that shown in the Limoges drawing.

The Limoges instrument is most nearly comparable with the smallest one in the Kloster Neuburg manuscript, on which it marks a typological advance. The resonating

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[11] Wewertem, op. cit., p. 233.

[12] Volbach, "Die Instrumente des Orchesters," p. 22, f.

body is larger and more regular in shape, the bridge has been evolved, and the number of strings increased to three. On the other hand the bow is still of the same type as that held by King David. However small the differences between the two instruments, the step between them is a considerable one.

There are three instruments which seem to be very closely connected with that shown in the Limoges draw-

Fig. 88. "Crowd" in St. Mary's Church, Shrewsbury, 15th century. From Galpin, "Old English Instruments of Music."

Fig. 89. Crwth in Westminster Abbey, 14th century. From Panum, "Middelalderens Strengeinstrumenter."

ing, viz., one on a thirteenth century bas relief in Worcester Cathedral (Fig. 87), one in St. Mary's Church, Shrewsbury, which dates from the beginning of the fifteenth century (Fig. 88), and one from the end of the fourteenth century in a wall painting in the Chapter House of Westminster Abbey (Fig. 89).[13]

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[13] K. Schlesinger states that the Chapter House was decorated between 1336 and 1360, and that additions to the frescoes were made towards the end of the century. "Prec.," p. 338.

These three all have hollow (probably flat-backed) resonating bodies, as is clearly proved by the presence of sound-holes, and at least two of them have stringholders, which is a fresh advance. On the other hand, none of them have bridges. The Worcester one, which is the oldest, has a round hand-hole and five strings. These details differentiate it from the Limoges instrument, which it otherwise resembles in its rounded shape and the slight incurvation of the sides. The Shrewsbury sculpture shows continued advance along the same lines. The incurvations are now very marked, and the hand-hole has been enlarged at the expense of the resonating body, which from the point of view of acoustics means a lower stage of development. The strings were probably four in number, though this cannot be seen quite clearly.

The instrument in the Westminster painting resembles the Limoges one in the number of strings and shape of the hand-hole, but its general shape strongly recalls the modern crwth. The resemblance to one of the instruments shown by Jones (Fig. 75), which also seems to have had three strings, is so striking that one is tempted to regard the Westminster one as a transition form between the three-stringed and the six-stringed crwths. This assumption would conform with Jones's statement about the three-stringed crwth. He says: "There was likewise a *Crwth Trithant* or three-stringed Crwth, which was the ancient Base-Viol. The performer on this instrument was not held in the same estimation and respect as the Bards of the Harp and Crwth, because the three-stringed Crwth did not require equal skill, and consequently its power was

less sensibly felt."[14]. The three-stringed instrument shown in Westminster Abbey is certainly not a bass-viol, it cannot be more than about fifty-five centimetres long, but it furnishes an undeniably interesting example of the three-stringed crwth.

This comparison of the Westminster instrument with that shown by Jones may seem to assume that the former had a finger-board. Like the Worcester instrument, it is placed here in the group where the presence of a finger-board cannot with certainty be demonstrated. The present writer is inclined to think these instruments had none, but is reluctant to explain the position of the left hand as due to an error in drawing, and therefore leaves the question open. In any case it may be affirmed that either there was a finger-board to support the strings when they were stopped, or that the draughtsmen were in error in regard to the position of the hand. One cannot conceive a technique in which the instrument was held as here shown, but had no finger-board.

The Westminster instrument has one detail which deserves some attention, namely, the sound-holes. These are not two circular holes, as in the six-stringed crwth, but are slightly curved, almost crescent shaped. Whether Prof. Sachs's theory as to the origin of such sound-holes be adopted, or the explanation given below (page 303), they approach rather nearly to the circular hole in the middle, and thus afford some support to the explanation given above of the line in Gruffydd ab Davydd ab Howell's poem; "and from its centre it winds in a ring." It will be

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[14] Jones, op. cit., p. 42, f.

remembered that the author of this poem lived in the fifteenth century, or not much later than the period from which this instrument is supposed to date.

The third group of instruments considered as forerunners of the crwth included those which obviously have a finger-board or at least a centre piece.

Fig. 90. Crwth on a 14th century seal from the cast in the British Museum. ("Encyclopædia Britannica," s.v. "Crowd.")

Fig. 91. Irish bowed cruit from the end of the 12th or beginning of the 13th century. From P. J. Lynch, in the "Journal of the Royal Society of Antiquaries of Ireland," 1908.

Perhaps the most characteristic representation of an instrument of this kind is that in an English thirteenth century manuscript, which, however, shows no bow (Fig. 92). The figure is small, but yet shows clearly what the instrument was like. The resonator is cut straight across the bottom; the sides are straight, and continued upwards to form a rounded arch enclosing the hand-hole, which is divided in two by a narrow centre-piece. There are four strings, which the draughtsman has only shown as extending up to the upper edge of the resonator, but if they be

prolonged over the hand-hole, one will lie along the centre-piece, one to the right, and two to the left of it. Mr. Galpin calls this drawing "the earliest representation of a Cruit with a finger-board."[15]

The instrument which comes nearest to the form of crwth preserved to modern days, is one shown on a seal of Roger Wade from the year 1316 (Fig. 90).[16] This is earlier than the date of the Westminster painting, and has a finger-board, bridge, stringholder and four strings. It definitely fixes the date at which the modern crwth appeared, though the Westminster painting shows that the three-stringed crwth also held its ground throughout the fourteenth century.

While the crwth in its modern form was thus the outcome of a long course of evolution, and then remained almost unchanged during several centuries, its forerunners are found to have been of various forms, and at times were subjected to lateral influences. Its primitive appearance is shown in the smallest instrument of the Kloster Neuburg manuscript; successive stages are represented by the Amiens carving and the Limoges drawing, then the thirteenth century finger-board instrument in the English manuscript, the Westminster painting, and Roger Wade's seal, the last two of which are pretty closely related to the modern crwth. The course of organic development is most clearly seen in the upper portion, hand-hole—centre-piece—finger-board. Roughly speaking, the resonating body gains in size at the same time,

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[15] Galpin, "Old English Instruments of Music," p. 75.

[16] Shown by K. Schlesinger in the "Encyclopædia Britannica," eleventh ed., s.v. "Crowd."

and its shape also develops, though this is one of the features which were most subject to outside influence. It is therefore worth noting here that K. Schlesinger seems to be in error in saying that the crwth of the eleventh, twelfth and thirteenth centuries, "in which the oval form of the fiddle or vielle was borrowed," never had any serious influence upon the modern crwth.[17] While admittedly the influence of other instruments may have had its effect, it is impossible to subscribe to the assertion that the oval form was borrowed from the fiddle.

Thus we have found the crwth's earliest ancestors on the Continent and not in Wales. How is this fact to be explained? Wewertem, taking his clue from Kiesewetter,[18] has gone carefully into the question. He starts from two remarkable facts; no representations of the crwth are found on the Continent later than the twelfth century, and the Freiburg and Wechselberg carvings and the Kloster Neuburg and St. Blasius miniatures are all practically contemporaneous. The question therefore arises: Can the sculptors have been immigrant Celtic monks who had brought with them the musical instruments of their native country, and with patriotic enthusiasm reproduced them to the best of their ability, either from memory, or from actual examples? Wewertem replies: "If it be remembered that in the sixth century Christianity was brought to Germany from the island realm by priests and monks of Celtic origin, it is easy to understand that constant communication with the mother country was maintained at first, and also that this gradually ceased when the first

[17] Schlesinger, op. cit., p. 339.
[18] "Cäcilia," XXII, p. 198.

missionaries were dead and Christian teaching had spread over the Continent. Supposing then that the first missionaries had brought with them their own musical instruments, the transplantation of these forms to foreign soil is just as natural as the non-transplantation of later forms evolved after the cessation of the missionary traffic. In this way we can explain, with Kiesewetter, the transference of the Welsh crwth to Germany, while its sporadic appearance there, and its disappearance after the cessation of missionary intercourse due to the spread of Christianity, can be traced with almost complete certainty in the very fact that just at the time when it was reaching a higher stage of perfection, it ceased to be found on the Continent. Such a transplantation of native instruments on to foreign soil is no fiction," he adds, "it has a precedent in the pseudo-Bonifacius letter of Cuthbert the Coadjutor (No. VII, S, 155)."[19] Rühlmann takes the same view.[20] Prof. Sachs notes in writing of the frame harp, that the Irish musicians who overflowed the Continent in the early Middle Ages made their form of harp so general there that Praetorius mentions the "Irish harp" among the continental instruments, and Dante even traces the Italian harp back to Ireland.[1]

Later investigators have brought to light a good deal of material showing that "round lyres" (a term under which the instruments now considered are sometimes included) were fairly general on the Continent, but never-

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[19] Wewertem, op. cit., p. 233, f. See also Giles's "Patres Eccl. Angl.," letter No. 114.

[20] Rühlmann," op. cit., p. 96.

[1] Sachs, "Handbuch," p. 232.

theless the attempt to connect them directly with the Grecian lyre does not seem happy. The present writer believes that as far as bowed instruments are concerned, their debt to Celtic influences is fully proved.

It was shown above that some uncertainty exists as to what the ancient Irish cruit mentioned in the literary sources really was like. We found that it resembled the lyre, and that a connection with the instrument carved on the Celtic crosses is justified (page 211). More is known about the Welsh crwth, but apart from the similarity of name no identification is yet possible.

The ancestors of the crwth are not found as bowed instruments earlier than the eleventh century, either in the British Isles or on the Continent. They appear in the golden age of the bardic system, when harp and crwth playing most flourished in Wales, as already described. But this golden age marks the close of a period of evolution which had begun at least six hundred years earlier. We know from Fortunatus that the Britons used the chrotta quite at the beginning of that period, and in all probability it was an important instrument of the bards. But was that chrotta similar to the ancestors of the crwth as they appear in the eleventh century, or was it the ancestor of the frame harp? In the latter case, what kind of instrument immediately preceded the two or three stringed bowed crwth? At what date, and under what influences did the crwth become a bowed instrument? Here we are again faced with difficult problems.

As we saw in the introduction, modern students of the subject tend to play different variations on one theme—the theory of the crwth's "transformation" from a plucked

into a bowed instrument. They believe that at some point of time (about A.D. 1000), the ancient Irish cruit was given a finger-board and played with the bow, which had then been introduced from the east. If this theory were right, there would be a simple answer to our questions, but it is attacked from two sides, and seriously shaken. First the ancestors of the crwth must be considered in relation to other bowed instruments which appear in the ancient Irish traditions, and then it must be compared with the northern bowed-harp.

A Celtic saga which has already been quoted, asks whether the *cruit* or the *timpan* was the older in Ireland (page 200). No direct answer is given, though the story seems to suggest that the cruit was regarded as the older. The question, however, is in itself enough to show that the timpan was one of the oldest Irish instruments, and this is further proved by the fact that it is named as well as the cruit in the description of Tara's Hall,[2] where the "timpanach" was allotted a special place beside the cruitier.

But what sort of instrument was the timpan? O'Curry probably collected together pretty well all that can be learned about it from the ancient Irish sources, and arrived at an astonishing conclusion. He believed himself to have proved first and foremost that the timpan was a stringed instrument and not a drum, and further, that it was played with "a wand and hair," in other words with a bow.

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[2] Written in the sixth century, but describing the customs of the third (Miss Panum's note, "Middelalderens Strengeinstrumenter," p. 107).

The Brehon Law has an important reference to the timpanach in an article dealing with wounding or injury to the person. It says: "If the top of his finger, from the root of the nail, or above the black, has been cut off a person, he is entitled to compensation for his (injured body). . . . . If the blood has been drawn while cutting his nail off, he is entitled to the fine for blood-shedding for it. If it be from the black (circle) out that his nail has been taken off him, he is entitled to the same fine as for a white (or bloodless) blow; *and if he be a timpanist, then there is a quill (or feather) nail for him besides*,[3] by way of restitution."

O'Curry was not quite sure how this provision should be interpreted, and asked: "Was the quill really used as a substitute for the bow, or, as we have it in this law, was it used as a substitute for the nail of the finger, or for the thumb perhaps?" He found the solution in a comparison with the two plucked bourdon strings of the Welsh crwth, and drew his conclusion accordingly: "We may imagine the timpan in fact to have been a kind of fiddle, played with a bow, but with two additional deeper strings, struck with the thumb or thumb nail, so that if the nail were injured it would be necessary to supply it with an artificial one."

The mention of the crwth refers to the relationship which O'Curry believed to have existed between the Irish and the Welsh instruments. He thought that the Irish cruit corresponded, not to the crwth of the Welsh, but to their *telyn*, which is a frame harp, while the crwth was

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[3] Author's italics

the same as the Irish timpan. His only difficulty was to understand how it happened that the names got confused in Wales.[4]

Dr. Sullivan has edited O'Curry's lectures and added commentaries of his own, in which he critically examines the theories put forward. He considers the question of the timpan which, he says, is closely interwoven with the history of the harp. He thinks that O'Curry proved once and for all that the name timpan referred to a bowed instrument, but that one or more of the strings of this bowed timpan were touched with the finger nails or a plectrum, for which reason he agrees that the instrument must in some way have resembled the Welsh crwth.[5] Later English investigators do not seem to admit these conclusions. Mr. Galpin finds O'Curry's view that the timpan was a bowed instrument "extremely doubtful." He quotes some notices which are of no real importance, but says nevertheless that "it seems very probable that this . . . . Timpan was a form of Psaltery 'plucked with a quill,' in later days becoming a Dulcimer 'struck with a rod.'" He finds some difficulty in the fact that the instrument is said to have only had three strings, but then again finds it probable that these "three strings" are a figurative allusion to the power dwelling in the instrument.[6] Whether more or less weight be accorded to Mr. Galpin's reference to the carvings on the Durrow[7] and Monasterboice crosses, the

[4] O'Curry, "On the Manners and Customs," III, p. 364, ff.

[5] O'Curry, "On the Manners and Customs," I, Introduction, p. 521, ff.

[6] Galpin, "Old English Instruments of Music," p. 68, f.

[7] See Fig. 83.

probability" of his conjectures still seems exceedingly small. The arguments which he adduces in support of his view are not sufficient to outweigh those given by O'Curry and Dr. Sullivan in favour of the opposite theory.

Dr. Grattan Flood, in his "History of Irish Music," also mentions the timpan. He says that it was a small instrument with from three to eight strings, and played with a bow or plectrum.[8] He adds: "Recent research has almost conclusively proved that the kinnor[9] and the trigonon, or three-stringed timpan, are identical," but this statement seems much too sweeping, at least until the evidence for it is produced.

The timpan was not the only bowed instrument known to the Irish. They also had one called the fidil,[10] which Dr. Grattan Flood believes to have been introduced into Germany in the seventh century by the Irish monks at St. Gall. The word *fidil* means in Irish "a little, bent rod," from fidh, a rod, and Dr. Grattan Flood believes that it signifies the bow. He explains the carving found on a stone on Church Island of the thirteenth century (Fig. 91) as a bowed cruit or fiedel, and says that this is the first sculpture of a bowed instrument to be found in Ireland. Later he remarks: "I take the instrument to be a bowed cruit, that is, a cruit played with a bow, the ancestor of the viol; in fact, it may be regarded as an Irish fidil."[11]

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[8] Grattan Flood, "A History of Irish Music," p. 26.

[9] The kinnor or kinyra was a kithara; the trigonon a three-angled, not three-stringed instrument. (Editor.)

[10] Grattan Flood, "The Story of the Harp," p. 27.

[11] Lynch, P. J., "Some Notes on Church Island," note by Dr. W. H. Grattan Flood. The "Journal of the Royal Society of Antiquaries of Ireland," 1908, p. 381.

No doubt it was a great satisfaction to Dr. Grattan Flood, as an Irish patriot, to put forward this theory of the fidil's migration to Germany. The theory rests on strong ground, for the first mention of the fiedel on the Continent is in the "Liber Evangeliorum" of the Benedictine monk, Ottfried von Weissenburg (850). But the theory has found many opponents, who prefer to believe that the fiedel moved in the opposite direction, and also dispute the view that the Irish fiedel was a predecessor of the violin. These questions cannot be discussed here. It is enough for our present purpose to note that bowed instruments were certainly known in Ireland at a very early date. These facts, if established, upset all theories of the bow's introduction into the British Isles from Spain or any other part of the Continent, and give added support to the view that it was domiciled there from very ancient times, especially among the Kelts.

It seems that Dr. Grattan Flood, like the English and other writers, has ignored O'Curry's theory that the Irish timpan = Welsh crwth, and the Irish cruit = Welsh telyn. This change of names seems to the present writer a priori more natural than the change of technique which is generally supposed to have taken place in playing the crwth. And certainly O'Curry's theory rests on a chain of evidence which it is difficult to dispute. So long as it has not been disproved, therefore, there is the possibility of its being correct. Then the Welsh crwth would be descended, not from an Irish plucked instrument, but from an Irish bowed one. If this theory be admitted, the chain of reasoning is complete.

It now remains to study the crwth and its forerunners

in the light of what is known of the history of the Finno-Scandinavian bowed-harp.

It has already been necessary to refer to the bowed-harp occasionally in what has been said of the history of the crwth. In point of fact, the bowed-harp has numerous and significant points of contact with the Welsh crwth and its forerunners.

Both the bowed-harp and the crwth are oblong in shape, and usually have straight sides. They may have incurved sides, but these are rarer in the bowed-harp than in the ancestors of the crwth, as shown in the Kloster Neuburg, Limoges, and Worcester Cathedral representations. A curve outwards is also found occasionally, e.g., in the Öje instrument and that sculptured in Amiens Cathedral. The shape of the sides seems not to have been affected by the bow. Although the instrument was always played with a bow, the straight sides are the original form.

The two instruments are fairly similar in size. It is true that there are some very small ones, such as the Finnish bowed-harps, Nos. 13 and 14, and the smallest instrument shown in the Kloster Neuburg manuscript, and also disproportionately large, such as the biggest one in the same manuscript, but these seem to be accidental variations.

The hand-hole is the most important feature which they have in common. In the first place, the wide-holed Ormsö harp may be compared with the first group of ancestors of the crwth, viz., the bowed instruments which have no finger-board. No valid explanation seems to have been given hitherto for the mysterious presence of the bow in connection with the three Kloster Neuburg instruments.

The bowed-harp solves the mystery. As the instruments are represented in the drawings, the nail technique of the bowed-harp is the most probable solution. It is of slight significance that the hand-hole of the bowed-harp is square, while that of the Kloster Neuburg instruments may best be described as heart-shaped. The Carelian bowed-harp, at least, sometimes has a hand-hole with a rounded outline.

It has been seen above that the wide hand-hole represents an advanced stage of development, which is preceded by the narrow hand-hole on one side found in the Carelian bowed-harps. No instrument with such a hole is at present known, either in England or on the Continent. But according to Mr. Galpin, an instrument of this type existed in Wales as recently as the middle of the nineteenth century. In enumerating specimens of the modern crwth he says: "A Crwth exhibited at Bangor about the year 1860 had only a small hole on the left-hand side of the finger-board sufficiently large to allow the thumb to pluck the two open strings."[12] When asked about this by the present writer, Mr. Galpin could only say that he had found the notice in a musical journal, and made a note of it in the margin of his copy of Engel's catalogue. A visit to Bangor, in Wales, revealed no trace of the instrument. There was nobody in Bangor who could remember it or give any information about it.

In his letter to the author he says that the only instrument with which he thought the Bangor crwth might be compared was the Warwick gittern,[13] "but," he writes,

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[12] Galpin, "Old English Instruments of Music," p. 78.

[13] Galpin, "Old English Instruments of Music," p. 23, f.

"from the reading of the note I am sure it was not the gittern." One can therefore only conjecture that the instrument exhibited was a crwth analogous to the narrow-holed bowed-harp.

There is a striking resemblance between the earliest known representation of the crwth, and the two-holed bowed-harp (Figs. 92, 93). Both have the same slender-

Fig. 92. "Crwth." 13th century miniature in the British Museum. Add. MS., 35166. From Galpin, "Old English Instruments of Music" (Pl. LII, p. 272).

Fig. 93. Juho Villanen playing the *jouhikantele*. Savonranta, 1916.

looking centre-piece, and the position of the strings is practically the same. There is even agreement as to the relative sizes of the two holes, the one to the left of the finger-board being smaller than that to the right. This arrangement is explained by the fact that the right-hand hole is the important one, in which the hand requires space. The reverse is true at a later period, when the finger-

board has been evolved and the technique changed. The Aberystwyth crwth has the left hand-hole hollowed out rather higher up than the other. The one two-holed bowed-harp which has two equal holes symmetrically divided by a centre-piece has a strong resemblance to the modern crwth. As far as type goes, the two instruments might be placed side by side. But whereas the modern crwth has a real finger-board, the two-holed bowed-harp has only a centre piece.

The manner in which the instrument is held is another important point of agreement between the bowed-harp and the predecessors of the crwth. This may be seen most clearly by comparing the Mäntyharju picture (Fig. 6) with the Limoges miniature (Fig. 86). The representation on the Durrow cross also recalls the position of the bowed-harp. This position is necessarily connected with the use of the hand-hole. So long as there is no finger-board, the knee position used in playing the bowed-harp is the most natural one, but when the finger-board has been evolved, a change to the breast or shoulder position takes place.[14]

The author has already expressed the view that the bowed-harp technique is the only thinkable one for several of the crwth's forerunners. He goes so far as to connect it with the hints which ancient Irish sources furnish as to a nail technique on the timpan. O'Curry's suggestion that the timpan, like the crwth, had two bourdon strings which were plucked with the *nails*, is rather far-

[14] Fig. 73 shows that instruments with no finger-board could be held at the shoulder, but this is an isolated instance and very difficult to explain.

fetched, and the technique which it indicates is too complicated to be the original one. The timpanach needed the use of his finger tips and nails, and enjoyed legal protection for them; this can be explained by the nail technique of the bowed-harp, which has been found to have existed in both Norway and Iceland, and must therefore have been general in the north in ancient times. There is accordingly every justification for supposing that it may also have been applied to the ancient Irish timpan. In any case, this technique need not be regarded as "an old Slavic and western Asiatic custom,"[15] as Professor Sachs calls it; it can more justly be called north-west European. For it is in north-west Europe that the oldest instances of this technique are found, there it was employed on the most primitive instruments, and there it was most widely current.

By applying the history of the bowed-harp to the ancient Celtic stringed instruments, we arrive at the same result as O'Curry reached by other routes, namely, that the ancestry of the Welsh crwth can be traced back to the ancient Irish timpan. These instruments were in all probability bowed-harps with hand-holes and the nail technique, up to the time when the crwth adopted the finger-board. But if this theory is correct, the question of the Irish cruit becomes more complicated than ever. Mr. Galpin refuses to accept the view that it was a harp, and precursor of the Irish clarsech, which is identical with the Welsh telyn. He says it was a lyre, but does not describe its technical construction, nor yet definitely establish its place in the history of musical instruments.

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[15] "Handbuch," p. 168.

CONCLUSION.

THE introduction to this book contained a summary of the scientific discussions which have taken place as to the origin of the bowed-harp, the precursors of the violin, and allied questions, and showed that these discussions have never yet been able to solve the central problem. Students seem to have been almost nonplussed by its difficulty, and at a loss for an answer. The theory which Fétis championed with such zeal, that bowed instruments came to Europe from the east, has never yet been conclusively proved, though it has received the support of most later investigators. It would seem that their attitude was more often dictated by esteem for Fétis, one of the most learned musical scholars of his time, than inspired by a conviction that his theory was correct. More recently there has been a tendency to ascribe great importance to Asia Minor in the history of European bowed instruments, but this too is only supported by weak arguments, at least up to the present.

The discussion, as was hinted in the introduction, has been carried on almost without reference to the bowed-harp, which now appears to form an important link in the history of northern stringed instruments. As conceived and presented by the author, the bowed-harp provides a

key to solve several debated questions about both Scandinavian and Celtic instruments of music, and has, indeed, a bearing on wider problems of western Europe.

The bowed-harp of Finland and Scandinavia is represented by a long series of instruments with a hand-hole and either a rounded or a flat back. Beginning from the narrow-holed, two-stringed Carelian harp, evolution has been traced in two directions; on the one hand, to the wide-holed, four-stringed Dagö instrument, in which the resonating body is constructed of separate pieces and has a flat back, and on the other hand, to the Savolaks one, which has a rounded back and three strings. While this typology might seem to suggest an eastern Finnish origin and movement westwards, the Scandinavian material, and the chronology which can be deduced therefrom, prove that the bowed-harp followed the general stream of northern culture, which flowed from west to east. Examples of both the narrow-holed and the wide-holed bowed-harp occur in Sweden. The twelfth century stone carving in Trondhjem Cathedral shows that the instrument was known early in Norway. This is the oldest northern example, and although the narrow-holed Carelian instruments lie typologically behind it, there can be no question as to their close connection. On the other hand, there are good grounds for connecting the Trondhjem instrument with one and perhaps more of those mentioned in the northern lays and sagas; the harp, giga, and fidla.

The historical and archæological material furnishes a number of more or less clearly marked localities to indicate the distribution of the bowed-harp from Norway eastward. There are traces of it at Trondhjem, in the

Dales of Sweden, Småland, Gothland, Swedish Esthonia, Carelia and Savolaks. Viewed chronologically, the examples drawn from these different localities range from about A.D. 800 to the present day. They do not give any clear indication, however, as to the routes by which the instrument may have travelled, for the amber bridge from Gothland (Fig. 54) does not conclusively prove the existence of the bowed-harp on that island, the Trondhjem carving is about four hundred years later, and all the other examples belong to modern times.

A study of the types suggests that the narrow-holed form prevailed in the more northerly part of this geographical area: Trandhjem, the Dales, Carelia; and the wide-holed one further south, in Småland (Gothland) and Swedish Esthonia. Here is some support for one of the views which can be taken as to different migration routes. In Chapter IV two possible explanations were offered for the presence of different forms in Swedish Esthonia and in Carelia; either the more advanced type drove the more primitive one before it, in which case the narrow-holed bowed-harp would have come to Esthonia and Carelia via Swedish Esthonia, or else both forms may have been evolved in Sweden, possibly as early as the Viking period, and the narrow-holed harp migrated to Finland, the wide-holed one to Swedish Esthonia, at different dates. The lack of any evidence from the west of Finland was noted, and also the hints of the narrow-holed form having existed among the Esthonians, where, according to the latter alternative, it would have to be regarded as an importation from Finland. To weigh against this view there are

the Esthonian folk-songs about the origin of the kantele, and their relationship to the Finnish variants of the same lays.

Irrespective of the direction in which influences may have moved between Finland and Esthonia, it is probably safe to assume that the bowed-harp took two distinct routes for its migration eastwards from Scandinavia, one more northerly than the other. The northerly route probably went directly from Sweden to the west of Finland, where most of the points of contact between Scandinavian and Finnish folk poetry have been localised. The southern route may either have gone directly from Sweden to Esthonia, possibly being the same as that by which the Swedish Esthonians left their mother country, or it may have gone via Gothland, whence a stream of culture is known to have flowed to the Esthonian islands during the age of the Vikings.[1]

Thus the two routes by which the bowed-harp may have travelled are the same as those followed by other cultural influences. If the nyckelharpa is descended from the bowed-harp, as seems probable, it is interesting to note that the simplest nyckelharpas have been found in the Dales and in the north of Swedish Ostrobothnia, i.e., near the boundary between the eastern and the western areas in which narrow-holed bowed-harps have been discovered.

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[1] Dr. C. A. Nordman states that at the end of the eleventh and during the twelfth centuries there was a stream of culture from Gothland direct to Carelia. A group of objects, some of which are demonstrably derived from Gothland, have been found in Carelia, north of Lake Ladoga. The best known example is a silver brooch from Tuukkala, near St. Michel, on which a Gothland woman's name appears in Gothland runic characters.

The Celtic bowed-harp has behind it a long history which culminates in the Welsh crwth. The author believes that the key to the problem of the crwth lies in the history of the bowed-harp in Finland, Swedish Esthonia and Scandinavia. The crwth is not a "transitional instrument," as has hitherto been supposed, which was plucked with the fingers or a plectrum until the adoption of the bow which came from the east. It was obviously known as a bowed instrument long before the assumed Oriental influences could have had any effect upon Celtic culture. The whole early history of the crwth points in the same direction. As O'Curry guessed, the crwth is in all probability descended from an ancient Irish bowed instrument, whether this was the *timpan* or the *fidil* of the legends. The obscure hints about the use of the nails for playing become quite comprehensible if they are understood as referring to bowed-harps played with the nail technique.

The bowed-harp proves that an instrument can be played with a bow, and its strings can be stopped, although it has no finger-board. This is an important point in the study of instruments of music, and revolutionises the current view, which has almost regarded bowed instruments and finger-board instruments as one and the same. It also seriously affects the principles followed in classifying musical instruments. Neither may the bowed-harp be left out of account in any scheme of classification, for it has played too important a part in northern culture and in the history of musical instruments.

The result here reached thus affects one of the points in the system of classification adopted by Professors von

Hornbostel and Sachs. The difficulty of fitting in the bowed-harp under the figures 321,2 has already been noted. Indirectly, it also weakens one of the reasons given for abandoning classification according to the mode of playing. Professors von Hornbostel and Sachs say that the mode of playing may have changed, and quote the old theory of the Welsh crwth's transition from a plucking to a bowed technique. This theory, however, would now seem to be untenable.

In regard to construction, the bowed-harp proves two points; first, that the shape of the back in musical instruments is not a fixed characteristic denoting a particular type, but that rounded and flat backs only denote different links in the same chain of development, and secondly, that a square or rounded hole in the upper end of an instrument need not indicate that its primitive form was connected with the Grecian *lyra* or Ethiopian *kissar*; such a hole may be evolved out of a narrow hole to the right hand side of the instrument, as has happened in the case of the bowed-harp.

The former of these points necessitates a revision of the generally accepted view as to the mutual relationship of instruments with trough or bowl-shaped, and with flat backs respectively. It is still possible to assume that the evolution from trough-shaped to flat, illustrated in the history of the Finno-Scandinavian bowed-harp, is only characteristic of northern countries. But a similar change is observable further west also, in the history of the Welsh crwth, and clearly revealed by the saying of the Welsh bard, Gruffydd ab Davydd ab Howel: "And the bulging of its back is somewhat like an old man." In view of

this line it is scarcely possible to class the crwth as an instrument which has always been "tripartite," i.e., made with ribs. There can be no doubt that it also was originally "bipartite," consisting of a rounded back and a soundboard. This upsets the theory, carried furthest by Rühlmann, that a flat back is an essential characteristic denoting western origin, while the rounded back is typical of instruments imported from the east.[2] For if the theory is inapplicable to the crwth, it is very doubtful whether it can be applied to the other western instruments which he names, the Drehleier and the Fiedel, especially if these are related to the bowed-harp in the way the author supposes. One may even question whether any stringed instrument whatever, which has a hollow resonating body, originally had a flat back. Further, there is no need whatever to regard trough-shaped instruments as importations from the east. In his account of the evolution of the resonating body, Prof. Sachs describes how, when natural materials such as coconuts, tortoiseshells, etc., were not ready to hand, they were replaced by hollowed pieces of wood, and he traces the gradual perfection of the resonating body consisting of back, ribs and belly. He goes on to say that the earliest appearance of this "box" was among the ancient peoples of Asia Minor, and that it was applied to western stringed instruments in the European Middle Ages, adding the important statement that "even to the present day this step forward has seldom been taken in the east."[3] All this may perhaps help to support the theory that the flat back is specially western, but the re-

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[2] "Die Geschichte der Bogeninstrumente," p. 38, f.

[3] "Handbuch," p. 125, f.

sonator hollowed out of a piece of wood need not be regarded as any kind of "substitute" for coconuts, tortoise-shells, etc. It may have arisen quite independently. Moreover, the fact that the step from rounded to flat back has seldom been taken in the east does not in any way prove that the flat back was not preceded by a rounded one in the west.

The second of the points noted above definitely settles the question of the relationship between the bowed-harp, the west European round lyres, and the ancient lyra. The material available shows the history of the bowed-harp so clearly, the links fit so exactly one into the other, that it is hardly possible to feel any doubt as to the connection. In all probability the wide-holed bowed-harp and the Welsh finger-board crwth are both descended from the narrow-holed bowed-harp—there is less certainty about the round lyre. The tortoiseshell, fitted with two arms and a yoke to join them, may be regarded as the prototype of the ancient lyre. From the account given in the pseudo-homeric "Hymn to Hermes," which describes Hermes's invention, this type of instrument seems to have been analogous to the Ethiopian *kissar*.[4] For the arms

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[4] Mr. Einar Pontan has called the author's attention to a possible point of agreement between the *kissar* shown in Fig. 95 and the description in the Hymn to Hermes. He gives the following philological explanation:

Philologists have been puzzled by the description in the Hymn to Hermes. The five most important lines are 47, ff (according to Gemoll, 1866), viz.,

πῆξε δ ἄρ' ἐν μέτροισι ταμὼν δόνακας καλάμοιο,
τετρήνας (πειρήνας *MS.*) διὰ νῶτα λιθορρίνοιο (διὰ ῥινοῖο *MS.*) χελώνης.
ἀμφὶ δὲ δέρμα τάνυσσε βοὸς πραπιδέσσι ἑῆσιν,

of the *kissar* were made of reeds, as the illustration shows (Fig. 95), and it does not seem possible to find anything else to correspond to the pieces of "reed" which Hermes is said to have fitted to his lyre. But the *kissar* represents a type which cannot be connected with the primitive bowed-harp, either in construction or method of playing.

καὶ πήχεις ἐνέδηκ', ἐπὶ δὲ ζυγὸν ἤραρεν ἀμφοῖν.
ἑπτὰ δὲ συμφώνους ὀΐων ἐτανύσσατο χορδάς.

I understand these lines thus: He (Hermes) constructed it (the lyre), cutting pieces of reed to measure, and boring through (*or* fastening them to MS.), the stony-skinned tortoise's back; round it he skilfully stretched an ox hide, and he put in the arms and fitted to them both a yoke; then stretched he seven harmonious strings.

What was the purpose served by these pieces of reed? The editor named above follows earlier interpretations and conjectures: "The inside of the tortoiseshell is next covered with reeds, and then leather is stretched over it." He clearly understands *πῆξε* (1, 47) as "fitted in," and lays stress on *ἐν μέτροισι* "in different measures." But it is scarcely possible to show any reasonable grounds for the suggested process, or an analogy in any other musical instrument.

Another explanation may be drawn from Pollux, "Onomastikon," 4, 62, where the parts of a stringed instrument are enumerated. Among them is mentioned *δόναξ*: *καὶ δόνακα δὲ τινα ὑπολύριον οἱ κωμικοὶ ὠνόμαζον ὡς πάλαι ἀντὶ κεράτων ὑποτιδέμενον ταῖς λύραις.*

This quotation refers to Aristophanes, "Frogs," 232. Now *κέρας*, and consequently also *δόναξ*, is explained as the "bridges" (German *Stege*), one at the lower end of the tortoiseshell, and the other near or identical with the yoke (*ζυγόν*).

But when the word *κέρατα*, "horns," is used in connection with the lyre, one thinks involuntarily of something other than these bridges. In the illustrations of Grecian lyres given by Guhl and Koner, "Das Leben der Griechen und Römer," p. 228, the arms quite obviously are made of goat horns. And they often retained the shape of horns even when they began to be made of wood.

It is true that two representations of ancient lyres have been found which might at first seem to contradict this conclusion. One is a painting in an old grave at Beni Hassan (some caves on the right bank of the Nile).[5] The instrument here shown differs considerably both from the Ethiopian kissar and the classic lyre, and possesses a striking resemblance to the wide-holed bowed-harp, with which it seems to have in common both the oblong or square resonating body and the wide hand-hole. The illustration, Fig. 96, is from a drawing by Engel, and it is hard to say how far it is trustworthy, for the reproductions given in different works vary, a fact which suggests that the original is not very distinct. The instrument seems to have a hand on the front of the resonating body, so it was probably played with one hand. Some students have reasoned from its shape, and from the musician's dress, that it is not Egyptian, and it has usually been explained as a Hebrew importation.[6 & 7] The question of

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Blümner, "Technologie und Terminologie der Gewerbe und Künste," 1879, II, 389, calls attention to this fact: "It seems that the two arms or sides of the lyre, called κέρατα, cornua, or ἀγκῶνες and πήχεις, were often made of staghorns." But he does not follow Pollux in identifying κέρατα with δόνακες, but insists that the latter were bridges. To quote his peculiar interpretation of the Hymn to Hermes: "These reed bridges were also covered with leather."

The illustration of the Ethiopian *kissar* (cf. etymologically Gr. κίδαρα !), the arms of which are obviously reeds, suggests the thought that Hermes added these δόνακες to serve as arms, πήχεις. This was not understood at a later date, whence the obscurity.

[5] Schlosser, "Alte Musikinstrumente," Taf. II.

[6] Engel, "The Music of the Most Ancient Nations," pp. 301 and 302.

[7] Cf. Åkermark, "Undersökningar," p. 21. f. (English source, Sir Gardner Wilkinson.) (Editor.)

its origin in this more restricted sense need not be discussed here, but all the details which suggest the mode of playing—the fact that it was obviously plucked, the high number of strings, and the position in which it is held by the musician—have convinced the writer that, in spite of its shape, this drawing represents an instrument belonging to the lyre and not to the harp family.

Fig. 95. Ethiopian *kissar*. From Schlosser, "Alte Musikinstrumente."

Fig. 96. Egyptian drawing of a lyra, about 1800 B.C. From Engel, "The Music of the Most Ancient Nations," p. 302.

The second picture I have in mind is presented by H. Panum, and represents a Hittite lyre (Fig. 97). Typologically considered, this instrument is very nearly related to the wide-holed bowed-harp. The form of the hand-hole, the position of the yoke, and the number of the strings, show striking points of re-

semblance between the two. Considering, however, the nearly square shape of the lyre, I find it difficult to presume bow technique in this case. And as this instrument might as well belong to the lyre family, I am not willing to accept it as decisive evidence. These two instruments do not seem to me sufficient to warrant an endorsement of Mr. Ambros's attempt, chiefly on account of their mutual resemblance, to refer to one common origin, the instrument first mentioned, the ancient square phoenix, and the instrument depicted in the Cottages manuscript, although this famous authority finds it hard to disprove their connection—rather oddly in view of his idea about the contributions of the north to the evolution of bowed instruments.[8]

Irrespective, therefore, of the vast world of ideas embraced by the classic lyre, the bowed-harp becomes a representative of ancient music in the north-west of Europe. The links used to connect the classical, Oriental, and the north-west European types of instrument are too weak to stand the strain.

If the Finno-Scandinavian and the Celtic bowed-harps belong to the same family and have a common origin, the next question is, where was their original home?

As long as there is no evidence of their type, i.e., hand-hole instruments played with the nail technique, from the Mediterranean or non-European countries, a southern or eastern origin would appear to be unthinkable. The type belongs to the northwest of Europe, and its birthplace must be somewhere within an area of which the south-

[8] Ambros, "Geschichte der Musik," III. Aufl. II, p. 34, f.

east boundary is, roughly, a line drawn from the Mediterranean coast of France to Russian Carelia. Here two alternatives are possible. Either the bowed-harp was indigenous in the British Isles, and migrated thence to Norway, and so towards the east, or its first home was in the Scandinavian north, and it moved in the contrary direction. Most of the evidence is in favour of the former alternative, which is almost the only possibility if the bowed-harp represents the conjecturally bowed instrument of the older Celtic sources—unless, indeed, it existed in Ireland even before the coming of the Celts. If the date of its origin were the period just before the Vikings, it might be an importation from Scandinavia into the British Isles. Mr. Galpin, speaking of the introduction into England of the triangular harp, says that the Norsemen, who could put such excellent clinker-built boats on the sea, might also have added to the eastern harp the front pillar characteristic of the northern form,[9] which Miss Panum supposes to have been a Celtic invention. The same reasoning can naturally be applied to the bowed-harp. As early as 1870 Engel pointed out the possibility of a connection between the Celtic and the northern instruments of music, and when speaking of the Welsh crwth he also mentioned "the fidla of the Norwegians, which in shape somewhat resembled the crwth."[10] For the rest, various instances have been proved of Norse influence upon Celtic culture. When Mr. Henderson, quoting MacBain, says that the mythology in Macpherson's "Ossian" "smacks of a Norse and not of a Celtic origin, for Celtic or Gaed-

[9] "Old English Instruments of Music," p. 10.
[10] "Descriptive Catalogue," p. 48.

helic it is not,"[11] this statement has considerable weight. Mr. Romilly Allen's recent criticism of Celtic art also has a bearing on the question. To quote him from Mr. Rolleston: "The great difficulty in understanding the evolution of Celtic art lies in the fact that although the Celts never seem to have invented any new ideas, they possessed an extraordinary aptitude for picking up ideas from the different peoples with whom war or commerce brought them into contact. And once the Celt had borrowed an idea from his neighbours he was able to give it such a strong Celtic tinge that it soon became something so different from what it was originally as to be almost unrecognisable."[12]

These problems cannot be definitely elucidated without a deeper study of the western connections and influences of the Scandinavians than is possible from the sources available to the present author. They lead, moreover, to fields of study outside his scope, which are more closely akin to other branches of science. It must be left to future research to determine the exact birthplace of the bowed-harp.

The history of the bowed-harp shows that evolution from a bowed hand-hole instrument to a bowed finger-board instrument is in no way impossible, but, on the contrary, very probable. It accordingly throws an important light on the question of the crwth's relation to the fiedel. It will be remembered that Ambros and Riemann, among others, regarded the crwth as a precursor of the fiedel; the frame has been removed and replaced by a solid neck

[11] "The Norse Influence on Celtic Scotland," p. 291.
[12] Rolleston, "Myths and Legends," p. 29.

as substratum for the fingerboard. On the other hand, Professor Sachs believes that the crwth copied the fingerboard from the fiedel. The former view has now obtained greater probability.

It has been seen above how the first researches into the origin of bowed instruments seemed to show that they were of European origin, and that the Welsh crwth was

Fig. 97. Hittite lyre. From H. Panum, "Middelalderens Strengeinstrumenter."

an important link in the chain of evolution. Subsequently this view was abandoned, and scholars were practically unanimous in assuming an Oriental origin. Now the bowed-harp has placed the crwth and its ancestors in a new light, and cast a heavy weight into the scale.

The northern origin of the bowed-harp indicates a solution of the problem of the bow. It is inconceivable that the discussion should now be closed, but future research will have to take into account the results here reached.

To Prof. Sachs's question: "Whence comes the bow, from the east, from the north?" we may now unhesitatingly reply: "From the north," at least in regard to the appearance of the bow in Europe.

It has usually been assumed that the musical bow is derived from that of the archer.[13] Prof. Sachs writes: "Among all peoples who shot with the bow at all, it may perhaps have developed independently, and became more and more differentiated from the weapon." The archer's bow was transformed into a plucked instrument, and indeed, into the musical bow.[14] Prof. William Ridgeway says there can be no doubt that both the northern harp and the Grecian lyre were evolved from the archer's bow.[15] In point of fact, given the weapon, the step forward to the bowed-harp is not a much longer one than that to the Oriental bowed instruments, and the present author has no wish to deny the possibility that this step may have been independently taken in various parts of the globe.

The saying that "there is nothing in the West which has not come from the East" is no longer applicable to the history of bowed instruments. The view originally taken by Kiesewetter and Fétis has now regained credit.

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[13] Mr. Wallaschek ("Anfänge d. Tonkunst," p. 136, f.) says that a bowed instrument need not be a stringed instrument, any more than a stringed instrument is always bowed. He refers to the *Kerkstock* of the Navilis, the *Reibstock* of the Marutses, and the East African *Tscharra*. There does not seem to be any convincing evidence of a transition from these instruments, which are usually "stroked" with a wooden rod, to ones played with a bow.

[14] "Handbuch," p. 128. Cf. Stumpf, "Die Anfänge der Musik," p. 40.

[15] "The Origin of the Guitar and Fiddle," Man, February, 1908.

We must recognise the correctness of Kiesewetter's train of thought when he wrote: "Many of the tribes which the Roman authors described quite indiscriminately as barbarians, indeed as savages, had varied knowledge and social arts, and also a gift for music. They had brought with them to their new home musical instruments of which the Greeks and Romans knew nothing. We shall see whether these instruments were not perhaps just those susceptible of highest perfection, the ones which seem to have been pre-ordained for sovereignty in music, and to give the art of later days its undeniable advantage over that of the ancients."[16] Ambros, another of the great men of German musical research, expresses the same thought still more categorically when he says in connection with the Celtic crwth: "The northern instruments of the fiddle type are also unquestionably the ancestors of the stringed instruments in our orchestras, those which give the noblest expression to instrumental music."[17]

The most recent German research is in line with this view. Prof. Sachs has applied to the musical bow Dr. Worringer's theory as to the opposition between the classical peoples of the Mediterranean and those descended from them on the one side, and the peoples belonging to a different circle of culture on the other.[18] In art, he expresses this opposition in the following antithesis: "The style of the primitive Gothic or north-eastern peoples is the expression . . . of a temperament for passionate emo-

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[16] "Cäcilia," XXII, 1843, p. 188.

[17] Ambros, "Geschichte der Musik," III, Aufl. II, bd., p. 34.

[18] Sachs, "Die Streichbogenfrage," Archiv. für Musikwissenschaft, I, p. 3.

tion, untiring search and brooding, metaphysical and mystical experience. The classic Mediterranean style expresses a clear, wideawake, thoroughly mundane, harmonious, transparent, unproblematic disposition." Prof. Sachs finds these contrasted temperaments expressed in the preference of the classical peoples for plucked instruments, while those played with a bow were cherished in the north. He says that the finger-board and frets of the former give exact intervals and force the player to clearness and transparency of execution, while, on the other hand, a bowed instrument and a fingerboard without frets know no such limitations. They can express all emotions, and produce an unconstrained melody analogous to the free lines of ancient northern ornament.

Appendix.

SOUND-HOLES.

MOST stringed instruments with closed resonating bodies have *sound-holes*, which may be of various shapes, and generally pierce the belly, but are sometimes cut in the resonator itself. When the instrument is played, the air enclosed in the resonator vibrates, and the holes enable the vibrations to be communicated to the outer air, thus in bowed instruments shortening, and in plucked instruments lengthening the reverberations, or resonance.[1] But the variety of shapes which the sound-holes can assume suggests that their original purpose was not purely acoustic. In some cases, at least, their form seems to have been determined by the laws of popular ornamentation, and the ideas about music and musical instruments which prevailed among peoples in the lower stages of civilisation. This fact gives greater interest to these apparently insignificant details than they at first glance seem to possess.

The following are the commonest forms: a circle, large or small, a C or crescent (facing either inwards or outwards), a large S or F, a triangle of three small holes,

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[1] Sachs, "Reallexikon," Schallöcher.

and a cross, formed either of four or five small holes, or by two slits crossing each other at right angles. Occasionally other forms appear, such as a heart, a T, etc. When placed in the back or side of the resonator, as happens in some primitive instruments, there is usually only one single opening or sound-hole, though this is not invariably the case.

It is probable that the small, circular holes are the oldest. They were used by the Egyptians as much as 3,000 years ago, for they may be seen on a *nefer* or *tamboura* of that age, one on each side of the string-holder.[2] The large circular hole generally occurs singly, and is then placed in the middle of the sound-board, but such holes are also found in pairs, one on each side of the strings. A round hole in the middle is sometimes open, as on the more modern guitars, and sometimes, particularly in the lutes, filled with a perforated, artistically executed "rosette." Professor Sachs believes that the rosette was originally introduced from the East, and used partly as ornament, partly as a mark of the maker or owner.[3]

Until quite recently little attention has been paid to sound-holes. Students of musical instruments have been content to mention the fact of their existence, and to enumerate the most usual types. Lately, however, Professor Sachs has studied the different forms, with a view to explaining their origin. They demand consideration here, because the types occurring on the bowed-harp and the Finnish plucked kantele make important contributions to

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[2] Schlesinger, "The Precursors of the Violin Family," pp. 247, 259.

[3] Sachs, "Reallexikon," s.v., Rose.

the material available for a study of their evolution. In regard to the rosette, Professor Sachs gives the explanation quoted above, and seeks no further, but he believes that the round, central hole was the origin of the other western forms. In order to explain how they were evolved, he describes the *vijalo* of the Southern Slavs, which has a kind of "bridge" placed over the central hole parallel to the strings. Now, says Professor Sachs, if this "bridge" were cut in the belly (instead of being superimposed), there would be two semicircular sound-holes close together; these then gradually increase in size, and take the form of a crescent, kidney, or the letter C.[4] The two crescent-shaped sound-holes then face each other, or have their concave side inwards, as they are found on a large number of western instruments, especially the fiedel and the viola da gamba. The crescent-shaped holes placed back to back are explained as follows: the holes were at first placed near the lower end of the instrument, when their backs followed the convexity of the lower curve (Professor Sachs divides the resonator of instruments of the violin family into three parts, the upper, middle, and lower curves, the upper and lower curves being convex, and the middle one concave). When the sound-holes are placed higher up, they are influenced by the middle curve, and turn their concave side outwards. In support of this theory the Professor quotes an illustration of a viola da gamba which has the sound-holes in the middle, but still recalls the earlier phase as it has two pairs of sound-holes, a central pair facing inwards, and to right and left of them two others, back to back, thus:) ( ) (.

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[4] Sachs, "Handbuch," p. 171, f

The author cannot find Professor Sachs's theory quite convincing. The round centre hole undoubtedly appears later than the small ones occuring either singly, in pairs, or in a triangle. And all these arrangements, as well as four small holes forming a square, are concurrent with the circular hole in the middle. Again, large round or oval holes occur at earlier stages, e.g., in the Welsh crwth, the Swedish nyckelharpa, and the keyed psalmodikon from Nyland in the National Museum, Helsingfors (see Fig. 62). It would thus seem that the smaller hole is the primary form, and the bigger one the product of a more advanced phase. It may be that the primitive little hole then developed in two different directions, one of which culminated in the big central hole and the rosette, the other in groups of little holes arranged in pairs, triangles, and other forms, but on this possibility the author does not yet wish to express a definite opinion.

It is certainly ingenious to explain the crescent-shaped holes by the "bridge" over the round central one, and there is a good deal of evidence to be adduced in support, especially on the old fiedels. The modern Kerimäki bowed-harp (see Fig. 25) also seems to furnish a rather striking example of such an evolution. Nevertheless, there is also a good deal of ground for scepticism. For instance, the crescents are also found in a position which cannot be explained by the "bridge" (see Fig. 52). Moreover, the crescent is used as an ornament—and thus as a primary form—where there is no kind of connection with a circular hole, not only in inscriptions and on different kinds of objects, but even on instruments of music (the Altai magic drum, the Ethiopian *kissar* (Fig. 95). These

crescent-shaped ornaments naturally require separate explanation, and it may be possible to find one which will also account for the cross-shaped sound-holes better than that given above.

Professor Sachs's theory that the crescent shaped holes were turned back to back in order to suit the inward curve of the violin instruments seems the weaker as such holes are found on instruments with straight sides where any such influence from a curved outline is impossible. The crescent shaped holes on the bowed-harps cannot under any circumstances have been suggested by a rounded instrument.

Figs. 98-103 Cruciform sound-holes on bowed-harps from Finland and Swedish Esthonia.

However, the object of the present essay is not to investigate the tenability of Professor Sachs's theory, but rather to consider forms with which he has not dealt, especially the cruciform sound-holes. In this connection it is necessary to take into account other shapes —including the crescents—owing to the general ethnological interest of the subject.

Under cruciform sound-holes are here included, at least to begin with, not only the form produced by two slits crossing each other at right angles, but also groups of small round or wedge-shaped sound-holes when they are so arranged that if joined together they would form a cross. These forms are rare in general, but curiously enough of unusually frequent occurrence on the old stringed instruments of the Finns and Swedish

Esthonians, on the bowed-harp and on the plucked kantele. Thus these instruments form a convenient starting point for the study of cross shaped sound-holes.

Fig. 104. (No. 1.)

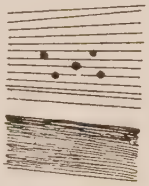

Fig. 105. (No. 2.)

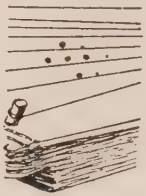

Fig. 106. (No. 3.)

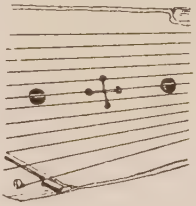

Fig. 107. (No. 4.)

Fig. 108. (No. 5.)

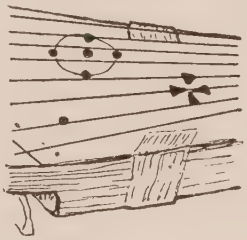

Fig. 109. (No. 6.)

Fig. 110. (No. 7.)

Figs. 104-110. Sound-holes on kanteles in the National Museum, Helsingfors. (Modern.)

The twenty-seven bowed-harps from Finland and Swedish Esthonia examined by the author—including one in a painting by Godenhjelm, Fig. 6—present the following different forms; small holes forming a *triangle* (1, example), round central hole, (3, one scarcely noticeable), pair of Fs (4, one upside down), pair of crescents (7, one with concave side inwards, different kinds of cross (13). The following combinations each occur once; round central hole and a square, pair of crescents and a slit, terminating in a round hole, pair of Fs and a cross, two crosses. Thus the cross occurs thirteen times, as against fifteen of

all the other forms. In four cases it consists of four small holes which if joined form a somewhat irregular cross, in five of two slits at right angles; in one case the cross is represented by five small holes arranged as on a domino, the form called a *cinque*, while two instruments, including the Ormsö one, have a cross made of four wedge-shaped holes.

Cruciform sound-holes are also very characteristic of the plucked kantele. The remarkable series illustrated has been compiled from only a portion of the collection in the National Museum, Helsingfors. The "cinque" is clearly seen in five of the illustrations given here, Nos. 1, 2, 3, 6, 8. No. 3 has two "cinques," the side hole of one being the centre hole of the other. In No. 8 the five holes can still be traced, though they have been joined by slits, but in No. 4 the middle one has disappeared, though the extremities of the slits retain their rounded form. In No. 5 the circles and slits have been combined to make wedge shaped holes. Here the wedges are triangular, but in No. 7 they have taken the form of segments of circles, at the same time becoming detached from each other in the middle. In No. 6 the four outer holes are connected by a circle scratched in the wood (not pierced), but the author does not undertake to say whether this may be regarded as a forerunner of the more highly developed circle appearing in No. 10.[5]

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[5] An ancient Egyptian *Nanga*—an instrument between a harp and a lute—having two sound-holes, one on each side of the strings, and consisting of a circle of small holes with a somewhat larger one in the centre, is depicted on a Tomb at El-Amárna. It has been reproduced many times, e.g., by Naumann, "Hist. of Mus.," Vol. I, p. 47, Fig. 32; Grattan Flood, "Hist. of Harp," p. 4, etc. (Editor.)

The last named is a typical eight-leaved rosette, and obviously serves not only as sound-hole but also as ornament. Only the centre is pierced, the rest of the figure being indicated by shallow graving in the wood of the soundboard. The pattern is obviously based on the "cinque," but whether it is most closely connected with the cross developed therefrom, or with the five holes and the scratched circle, is a question of minor importance.

This series coincides to some extent with the series of cruciform sound-holes on the bowed-harp, although at several points the material is more abundant. The kantele series is undoubtedly remarkable in that it furnishes an unbroken chain of evolution from the "cinque," via the cross, to the eight-leaved rosette.

Turning now to the consideration of material from a wider area, we first find confirmation of the statement that cruciform sound-holes are characteristic of the Finnish plucked kantele. They occur on six of the kanteles in the Nordiska Museum, Stockholm (in two cases in the "cinque" form), a kantele in the Historical Museum of Music, Stockholm, one in the Ethnographical Museum, Stockholm, one in the Historical Museum of Music, Copenhagen, and on the Finnish kantele shown by Mr. Galpin. The cross also appears on several of the nearest relations of the kantele; the Esthonian *kannel*, Lithuanian *kanklys* and the Russian *gusli*.[6] More distant connections to the west and eastward will be considered below.

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[6] Masloff, "A List of Musical Instruments," Nos. 8, 9, 11, 17.

As already remarked, four or five small sound-holes so placed as to form a cross are rare outside Finland.[6a] The author only knows three instances of a four-holed cross, viz., on a *kunjerry*, an Indian bowed instrument,[7] on a *rebec* played by an angel in a painting by Fra Giovanni da Fiesoli (1433),[8] and on a langeleik from Norway in the Nordiska Museum, Stockholm. He has noted the cross composed of five holes in nine instances: a fourteenth century *gigue* in Mans Cathedral, of which Sandys and Forster expressly say that the sound-holes are "peculiarly placed,"[9] a Southern Slav *tanburica* in Professor Sachs's collection,[10] five Southern Slav *guslas*, viz., one in the Historical Museum of Music, Copenhagen, one in the Heyer Museum, Cologne, one the property of the author, and two in Masloff's catalogue, and finally, a little viola in Fétis's "Histoire Générale" (V, page 167). The "cinque" on the *gusla* in the Heyer Museum was the only instance of this form of sound-hole in the entire exotic collection of that museum.

The actual cross is more usual. One formed by two slits at right angles—the same as on a Finnish kantele—occurs on two Ostyak instruments, a *kiotang* (harp),[11] and

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[6a] On the belly of a *Tamburi* of Southern India there are four separate groups of five small sound-holes forming four cruciform figures. See Capt. C. R. Day, "The Music and Musical Instruments of S. India and the Deccan," London, 1891, plate facing p. 128. In the text (p. 130) Day mentions *Vinas* with sound-holes composed of circles of small holes. (Editor.)

[7] Fétis, "Histoire Générale," II, p. 299.

[8] Kinsky, "Cat.," II, p. 327.

[9] Sandys and Forster, "Hist. of the Violin," p. 48.

[10] Sachs, "Reallexikon," p. 376, n.

[11] Karjalainen, "Jugralaisten uskonto," p. 474.

a *nares-jux* (Fig. 48); on a Vogul *damba*,[12] and a Russian *gudok* in the National Museum, Helsingfors. Two Norwegian *langeleiks* in the Nordiska Museum, Stockholm, have very similar crosses, though the arms are rather thicker. A cross composed of wedges, either standing free or surrounded by a circle, occurs on a German *krazzitra* in the Heyer Museum—the earliest form of zither—a *helmzittra*, and a Swedish *hummel* in the Nordiska Museum. A cross of leaves, again, is found on a *fiedel* in the Historical Museum of Music, Copenhagen, and on a similar

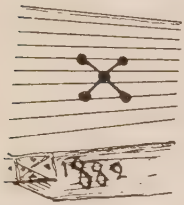

Fig. 111. (No. 8.)

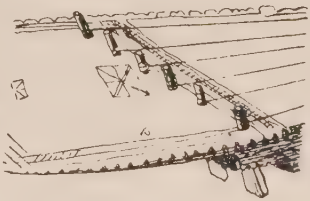

Fig. 112. (No. 9.)

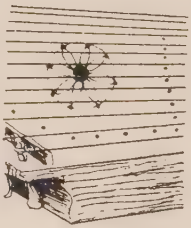

Fig. 113. (No. 10.)

Figs. 111-113. Soundholes and ornaments on kanteles in the National Museum, Helsingfors. (Modern.)

instrument shown by Sandys and Forster.[13] The eight-leaved rosette appears either suggested or fully developed on a number of German zithers (e.g., No. 426 in the Heyer Museum), and artistically executed as a lute rosette on an English harp-lute shown by Mr. Galpin.[14] Finally, it is easy to see that a large number of lute rosettes, even the most elaborate ones, are based either on the cinque or on the cross.[15]

[12] Masloff, "A List of Musical Instruments," No. 3.

[13] Op. cit., p. 43, Fig. 11.

[14] Galpin, "Old English Instruments of Music," Plate IX, No. 4.

[15] Fétis, "Histoire Générale," V, p. 164. Schlosser, "Alte Musikinstrumente," Plate XIV.

The above list makes no claim to be exhaustive. The author has unfortunately only been able to visit a small number of museums in which musical instruments are preserved, and the literature of the subject is far from giving complete information on this detail. Moreover, instruments and representations thereof are found in the most remote spots. The material here collected does seem, however, to give a definite result on one point, namely, the general distribution and relative frequency of cruciform sound-holes. It seems to justify the statement that the cross shape is most usual in Finland, and next most frequent among peoples related to the Finns, in Germany and in Scandinavia.

We have now to try to answer the questions, how did the cruciform sound-holes arise, did they originally serve any other than an acoustic purpose, and if so, what?

Reference was made above to Professor Sachs's theory that the rosette was originally partly ornament, and also partly a kind of badge, a mark of the maker or owner. Even if the latter purpose existed in the case of the rosette, it can hardly have existed in other kinds of sound-holes. Various designs, letters, etc., may be carved into a rosette, but the other sound-holes only admit of insignificant variations. For the rest, even if the rosette had some such significance at one time, its later development has been solely influenced by the desire for decoration. The rosette is the ornament of the lute.

In regard to the cross, probably no other utilitarian purposes than that of acoustics need be considered, but it occurs on musical instruments in cases where it is clearly

ornamental. The first question therefore is: which was the earlier intention, ornament or sound-hole?

The eight-leaved rosette shown above from one of the Finnish kanteles is obviously decorative, as only the centre is pierced. Two kanteles have obviously ornamental crosses, No. 8 on the side of which there is a horizontal cross with a dot between each pair of arms, and No. 9 which has a double cross.[16]

The cross on No. 4 (Fig. 107) might likewise perhaps be regarded as ornamental, seeing that there are also two circular holes in the sound-board, which render it unnecessary for acoustic purposes.[17] It may even be strongly questioned whether there was any deliberate acoustic intention about the holes in any of the series of kanteles described above. Their effect can hardly have been learnt in any other way than by practical experience. But such experience can scarcely have been gained from the use of these instruments, for the specimens preserved to the present day at any rate—unlike the modern violin—were put together in so primitive a manner that there was probably no need for sound-holes to produce communication between the interior of the resonator and the surrounding air. One single piece of evidence, and that not quite conclusive, can be produced in support of this view. One of the newest bowed-harps (No. 4, Fig. 12) has only one, scarcely per-

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[16] The former ornament reappears exactly on King David's brooch (Fig. 85) and on a zither-like instrument shown by Miss Panum, but no significance can be attached to these comparisons, as the design is of very wide distribution.

[17] The same may be said of the "cinque" on the Mora instrument (Fig. 63), as the soundboard is also pierced by a square and two large hearts.

ceptible hole in the sound-board, a fact which might be explained as follows; no desire for decoration was felt by the maker, the need for sound-holes was not conscious (the existing hole would be of little use as such), and every idea connected with the figures which the holes formed has died out.

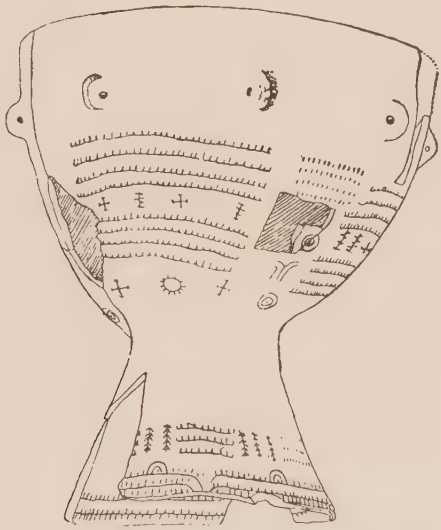

Fig. 114. Stone Age "kettledrum" (about 2500 B.C.)

However this may be, evidence that the cross was used as an ornament on instruments of music need not be taken from Finland. The Indian *saradiyâvinâ* has two cruciform ornaments on the side of its deep resonating body.[18] Several German zithers have similar decorations. A psalmodikon owned by the author has three cruciform orna-

[18] Sachs, "Die Musikinstrumente Indiens und Indonesiens," p. 121.

ments on the slip of wood which runs under the strings (in this case the sound-hole below is circular); and these are only a few examples of recent date.

Professor Kosinna gives the oldest and at the same time the most remarkable instance, in an illustration of what he calls a "Hand-pauke" (kettledrum) from about B.C. 2500, which is decorated with crosses and other signs. This Stone Age relic (Fig. 114) gives a considerable antiquity to cruciform ornament, and, mark well, shows it on a kettledrum. No further evidence is needed to prove that the cross was used as an ornament on instruments of music before it was known as a sound-hole.

There is accordingly reason to suppose that the sound-holes formed by two slits crossing each other, or four or five dots placed so as to represent a cross, owe their inspiration to *ornamentation.* This brings us to the much debated question of the origin of cruciform ornament.

It is true that this particular ornament occurs on other objects as well as, and oftener than on musical instruments, and the investigation might therefore be abandoned at this point, and left for students of other subjects. But whether the cross be interpreted as a symbol or as a protective mark, its presence on instruments of music has a special interest, as it may be connected with certain ideas about the divine origin and miraculous potency of music itself. And as cruciform sound-holes seem to be specially characteristic of the instrument which forms the subject of this book, a discussion of their significance is well in place here.

The origin of cruciform ornament has been explained in many different ways. Most usually it has been regarded

as sheer ornament, merely used to satisfy the instinct for decoration. Mr. Herman Steinmetz has tried to find for it an astronomical descent; others have derived it from a human being with outstretched arms, the four points of the compass, etc.[19] Wundt calls attention to the fact that four was regarded as a sacred number: "The legends of the Aztecs and the Incas celebrated four brothers as the bringers of culture. Malay mythology conceives the world as a square, with four gods standing one at each corner, to hold up the heaven. The cross which the first missionaries beheld with astonishment in the temples of Peru and Mexico has a similar origin, representing the four principal gods and the four quarters of the world."[20] The two most fruitful, and at the same time most hotly debated theories, however, are on the one hand that the cross—especially as derived from the wheel—is a symbol of the sun, and on the other hand that it is a magic protective mark.

Montelius's theory is well known. He asserts categorically that "the equal-armed cross is nothing else than the four spokes detached from the wheel of the sun in pre-Christian times, and therefore signifies first the sun god, then the divine as such."[1] The fact that the cross appears so much oftener than wheels with six or eight spokes, he explains by saying that the actual wheel only had four spokes for many ages, and he considers that the occurrence of varying forms, different numbers of spokes in the wheel symbols just as in real wheels, affords positive proof

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[19] Cf. Lechler, "Vom Hakenkreutz," p. 10.

[20] Wundt, W., "Völkerpsychologie," 3, p. 548.

[1] "Nordisk Tidskrift," 1904, p. 7.

that "the symbol really is a wheel, not a cross surrounded by a circle or something of the kind, as has been argued in the case of the four-spoked wheel." He even carries his theory so far as to assert: "If the ordinary wheel had not been made with only four spokes for so long a period that the sun-wheel also came to be regarded as four-spoked, the Greek cross with four equal arms would probably never have arisen."[2] This is undeniably a bold assertion, which almost needs Montelius's authority in order to obtain respect, for it denies to the pre-Christian man the ability to cross two sticks without at the same time symbolising the sun as a divinity by a four-spoked wheel—surely a rather more complicated process.

Montelius's theory has of late become one of the cherished doctrines of Professor Kosinna's school. Professor Kosinna himself, who gave a prominent place to Teutonic religion in "Die deutsche Vorgeschichte," seems to take it as certain that the sun was worshipped as a divinity right from the Stone Age, and represented not only by a circle or spiral or four-spoked wheel, but also, as he expresses it, "in the abbreviated form of a wheel that has lost its felly, i.e., a cross."[3] He explains the crosses on the kettledrum mentioned above as similar "four-spoked wheels with no fellies." As to the kettledrum itself, he says that it was an important factor in worship, and that the other figures upon it include emblems of at least five different divinities, whom Oskar Fleischer has connected with the five ancient planets, the week of five days, and the earliest musical scale of five notes. Nevertheless he notes that no other

[2] "Nordisk Tidskrift," 1904, p. 165.
[3] Kosinna, op. cit., p. 75.

evidence of older or even equal age is known for any of the group of emblems.

It seems as if Professor Kosinna had a kind of feeling that all this theory of the cross as the wheel of the sun minus its felly was not absolutely certain after all. This may be deduced from the distinctly evasive nature of his explanation in one passage. After allowing that the ancient Teutonic conception of the sun must seem unnatural in modern days, especially in the eyes of town dwellers who only see the sun when it is high in the heaven, not when it is rising or setting, he goes on to say that it looked different to our forefathers, who saw the midnight sun for a longer or shorter period every year, and in any case lived much nearer to it than we do. For them the representation was exceedingly natural, "even if a little conventionalised, as it was used for an ornamental figure."[4] One can certainly say that the cross as a symbol of the sun is "a little conventionalised," but is it not rather fantastic to combine conventionalisation with the observations of our forefathers in the land of the midnight sun? The case is not much improved when he adds: "In order to represent nature, one must look at it with the eye of an artist. Artistic eyes see differently and also perceive more in it than would an ordinary town child of to-day."

As a matter of fact, this theory has long ago been strongly combated, among others by the Danish scholar, Ludvig Müller.[5] In his study on the use and significance of the "swastika" symbol in prehistoric times, he says

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[4] "Die deutsche Vorgeschichte," p. 79.

[5] "Det Kongl. Danske Videnskabernes Selskabs skrifter." Hist. og phil. Afd. 5, Vol. I.

that the rim is the essential thing, on which the use of the wheel as symbol of the sun depends: "Without the rim there is no resemblance to a wheel or to the sun; neither can the angular lines of the 'swastika' represent spokes." There seems to be good ground for this view. Even if the wheel cross is to be regarded as a solar symbol, there is no need to derive the rectangular cross from the same conception.[6]

A young German scholar, Jörg Lechler, has lately discussed these questions in a study, "Vom Hakenkreuz." He calls his work "the history of a symbol," which shows how he regards its subject. There is no need to tarry here over his argument that the swastika, like the crutched cross, or cross potent, was a solar symbol, that this symbol was invented during the Stone Age (here he follows Prof. Kosinna), and that the swastika arose at a spot somewhere in the Siebengebirge, whence it spread all over the world. He naturally has to discuss the whole complex of solar symbols, and he presents an enormous mass of material, but his treatise makes but small contribution to the question whether the cross as ornament had any other than a symbolical significance. However, in one passage he says of the swastika—in order to prove that it spread from a single spot on the globe—"wherever it occurs, it is not a mere ornament, but has the same auspicious significance of averting bad luck."[7] He does not examine further the implications of the cross as a sign of luck or protection against misfortune, but it is just this protective meaning which forms the basis of another theory of

[6] Cf. Helm, "Altgermanische Religionsgeschichte," pp. 174, 186.

[7] Lechler, op. cit., p. 2.

its origin, consistently expounded by Professor Westermarck in his account of the Moroccan belief in the evil eye.[8]

After stating that the Moroccans, like many other peoples, believe that a magic power is concealed in the human eye, Professor Westermarck enumerates the different protective means used to thwart its evil influence. One common method is to cast back the injurious power supposed to stream from the eye, and this is often done by extending towards the eye the five fingers of the hand. The person protecting himself reinforces the gesture by saying the words, "Five in your eye."

The protective power of the hand with its five fingers has been transferred to all representations of the hand or fingers, and also to the number five, which has thus become in itself a means of protection, and is used as such in many different ways. Professor Westermarck shows several amulets against the evil eye on which there are five beans, five shells, beads of five different colours, five-pointed stars, or the number five marked in some other way. A very common type is the *l-hamsa (cinque)*, an amulet made of two thin plates of silver on which two cinques appear in strongly marked relief, either indicated by bosses in the silver or by bits of coloured glass, one cinque being larger than the other and the central boss common to both.

"Figures containing this number (five) are frequently found on guns, pottery, trays, bags, rugs, carpets, and so forth. Such figures often lose their magic character and

[8] Westermarck, "Ritual and Belief in Morocco," Vol. I, p. 445, ff.

become genuine ornaments, but that they originally had a practical aim is obvious not only from their similarity to charms, but particularly from the fact that they are still in very many cases regarded more or less in the light of charms, even though they be at the same time spoken of as ornaments."[8a]

Professor Westermarck calls attention to the fact that the reliefs on many amulets are grouped in crosses, and that the bosses in the inner group which oppose each other are actually joined so as to form a cross. He has found the number five and a cross combined on various women's ornaments, which serve at the same time as amulets. But a plain cross merely consisting of two lines crossing each other at right angles, without the middle point being in any way accentuated, is also used as a protection against the evil eye. Thus a little black cross is often seen tattooed on the right hand ring finger of both men and women. In some districts the women have small crosses tattooed on their faces. And among certain Berbers to the south of Fez, it is customary for families, in which several children have died, to protect the life of the next son to be born by tattooing a cross on the tip of his nose.

Professor Westermarck believes that one reason why the number five is so often presented in the form of a cross is that the cross is thought to divert the evil influence streaming from the eye. "The evil power is thereby dissipated to all four quarters of the compass, instead of injuring the person or thing to which the gaze is directed."

[8a] Westermarck, op. cit., p. 452.

Professor Westermarck quotes a number of ornaments to show how two cinques with a common centre, a double cross, and an eight-leaved rosette all coincide. This kind of figure is very common on embroidery and metal and leather work. He thinks that they all go to show that points or circles of the type found on amulets, as well as two lines placed crossways, are all expressions for one and the same idea—the number five. He says as a general conclusion: "The figures with which the Moors decorate their objects are thus largely identical, or almost identical, with those figures representing the number five by which they protect themselves or their animals from evil eye of their fellow-men. And in most, if not all, of the cases referred to the aim or design *is not only to embellish, but also to protect, the object on which it is painted, embroidered, or engraved.*"[8b]

It is unnecessary to follow Professor Westermarck any further. He goes on to show how new figures are evolved from the double cross and the eight-leaved rosette. It is enough for our present purpose to note how widely the cinque and the cross formed from it are used in Morocco for protection against the evil eye.

Though Professor Westermarck has worked out most fully the theory of the protective power of the cross, other writers can also be quoted in its support. Dr. Seligmann writes: "The cross is generally held to be a powerful charm against all kinds of magic. It is worn as an ornament round the neck, ... placed in the infant's cradle or under the pillow, fastened to the caps of child-

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[8b] Westermarck, op. cit., Vol. I, p. 454, f.

ren, carried in the hand as a crucifix. . . . . Equally effective are all objects marked with a cross or which resemble one; stones, keys, coins, knives, the buckthorn, etc. . . . . The cross is painted on doors, sills, stables, window shutters, bakers' ovens, pig sties, under butter dishes, on milk vessels, etc."[9] Elworthy says: "We are told that the Spanish conquerors of Mexico were astonished at finding the cross in common use by men whom they knew to be heathens, and that they managed to ingratiate themselves with the natives by displaying the cross on their standards. Many crosses appear also on the ancient Peruvian hieroglyphs. . . . . That the cross was actually worn as an amulet in ancient times is clearly proved by the fact that two men called Kharu (Syrians) appear on Egyptian sculptures actually wearing it suspended to the neck."[10]

The above material could undoubtedly be augmented by further search, but the evidences already quoted of the use of the cross for protection are so overwhelming that it is scarcely necessary to multiply examples.

There is a considerable difference between the two theories here described. The cross as a symbol of the sun or sign of the divinity is at the same time recognised —at least by Lechler—to have had a lucky or protective significance. But in the theory of the cross as a means of protection against the evil eye there is at least no noticeable emphasis on its significance as a symbol or sacred sign. As to its origin, the two theories are totally at variance. The one derives it from the four-spoked

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[9] Seligmann, S., "Der böse Blick," II, p. 334, f.

[10] Elworthy, Frederick Thomas, "The Evil Eye," London, John Murray, 1895, pp. 278, 288.

wheel of the sun's wain, the other from the primitive notion of the magic power wielded by the five fingers of the hand.

Reference has been made above to the idea of the cross as an ornament, and to Professor Westermarck's statement that figures composed of the number five are often regarded as purely decorative designs. Various archæologists take this view. The five bosses forming a cross are very frequent on shields, clasps, trinkets, and numerous other objects from the Bronze and Iron Ages. As a large number of other designs also occur, there are strong grounds for believing that such bosses, points, or holes, served a purely ornamental purpose, and were simply due to an attempt to satisfy the desire for decoration.

It was shown above that the cross on instruments of music was not always placed there for utilitarian reasons. But both in cases where it serves as a sound-hole and those where it does not, the question to be solved is whether it is fundamentally a sacred symbol, a protective mark, or pure ornament. And in judging this question account must also be taken of another circumstance, viz., the sacredness of musical instruments, and their use on religious and magical occasions.

The idea of the magic drum and its effects is widely distributed, but need not be detailed here, nor yet the general position held by music and musical instruments in the legends and myths of different peoples.[11] The origin of musical instruments is nearly always connected

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[11] Erwin Felber gives an excellent account of this subject in "Die Musik in den Märchen und Mythen der verschiedenen Völker," Report of the Fourth Congress of the I.M.S., p. 167, ff.

with the gods. Skjérne says: "The musical section of Greek mythology is mainly concerned with the history of the creation of instruments.[12] Here it is enough to quote a few conceptions which directly present the instrument of music as a holy implement of divine origin, endowed with magic power.

Weske says that in Esthonia: "The properties of the harp showed that it was a holy instrument. If one played to the sick they did not die, or but rarely, and if one played beside a corpse, death would not snatch away the survivors so quickly. Once it happened that every one in the house except the harpist lay very ill of the plague, and he had been playing his harp in the night. One night, just as he was playing, a white figure appeared under the window, and thrust in its long, beast-like head. Then he drew his fingers over the strings more powerfully than ever, and not a single one of the sick persons died."[13]

In Morocco the *jnun*, jinns—spirits which attack men, beasts, and objects –are driven out by qualified persons who visit their patients by night, and perform their ceremonies to the music of different instruments.[14] The Biblical account of David's harp-playing, which caused the evil spirit to leave Saul[15] may also be quoted here. Wal-

[12] "Plutarks dialog om musiken," p. 155.

[13] "Bericht über die Ergebnisse einer Reise," Verh. d. gel. Estn. Ges. VIII, p. 45.

[14] Westermarck, "The Belief in Spirits in Morocco," Acta Academiae Aboensis Humaniora, I; 1, p. 96, ff.

[15] I Sam., 16, 23.

laschek says that: "The Ogongas (Lake Ogour) swung heavy iron bells, everywhere as a sign of priestly dignity."[16]

The Ostyak *nares-jux*, described above, was also sacred. It might not be laid on the ground, nor carried from one dwelling to another without a wrapping.[17] This is a widespread idea; what is holy is injured by contact with the ground; an amulet loses its miraculous power if it is dropped, etc.[18] The talharpa in Ormsö was another sacred instrument, and the most skilful performers on it were believed to have a divine gift.[19] The idea that the magic drum is sacred is of frequent occurrence.

Weske also quotes the following Esthonian legend as to the origin of the harp: "The harp was made by God himself. God (Jummal) and the Evil One (Wana Halb) once held a wager as to which of them would first invent a musical instrument. God at once took a leaf from a tree, put it in his mouth, and piped on it, but the Evil One began to make the bagpipe, and worked at it for several days, whilst God gaily fluted on the leaf. When the Evil One had at last finished, they played for their wager, the one on the leaf and the other on the bagpipe. But God's flute was more beautiful, and had also been finished first, so God came out the winner. Then they laid another wager, which of them would first make a musical instrument, and which instrument would be the more beautiful. Then God began to make a harp, and

[16] Wallaschek, "Anfänge der Tonkunst," p. 111.
[17] Karjalainen, "Jugralaisten uskonto," p. 566, f.
[18] Westermarck, "Sex år i Marocko," p. 206.
[19] Cf. p. 77.

the Evil One a horn. God finished first, and began to play on his instrument, while the Evil One was still working at his. When the Evil One had finished they played for their wager again, but God played much more beautifully, and won the victory. All musical instruments (i.e., all known to the Esthonians of that place), including the harmonica, were made by the Evil One. God only gave melody to the tree-leaf and the harp."[20]

The conception of the sacredness of musical instruments may either be regarded as a transference of the ideas as to its origin and effects, or be connected with its use as one of the most important adjuncts of worship. From the primitive drum right up to the organ, which is to this day regarded as sacred, instruments of music occupy a peculiar position which explains the ideas connected with them. Dr. Frazer has excellently characterised the relation to religion of music and the musician in the following words: "We cannot doubt that this, the most intimate and affecting of all the arts, has done much to create as well as to express the religious emotions, thus modifying more or less deeply the fabric of belief to which at first sight it seems to minister. The musician has had his share as well as the prophet and the thinker in the making of religion."[1]

Thus there is complete justification for interpreting the cross-shaped sound-holes both as symbolic signs and as magical protective marks. Seeing that the cross of two slits, or perhaps that of four or five holes, seems to be the primitive one, and that within a circle is only occasion-

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[20] Op. cit., p. 46.

[1] "The Golden Bough," Adonis Attis Osiris, p. 47.

ally suggested in the instruments examined, the author accepts the latter explanation of their significance, as simultaneous with, or perhaps previous to their acoustic purpose. He is influenced by the fact that in this case the fear of evil influences seems less far-fetched than memories of the ancient solar cult, and also that some peoples believe that what is holy is peculiarly exposed to the injurious influences of evil spirits, evil eyes, and all kinds of magic arts.[2]

Both Professor Westermarck and Dr. Seligmann have shown that the fingers of the hand and the number five derived therefrom are not the only means by which the injurious power of the evil eye may be repelled. The figure of an eye or pair of eyes, or something resembling an eye, can have the same effect. And the eye may be represented by a triangle; of this Professor Westermarck gives several examples. He considers that the reason why the eyebrow is represented by two straight lines forming an angle is, at least in some cases, the plain fact that in a material like leather it is easier to scratch two straight lines than one curved one.

The natural way of representing an eye is, of course, by a curve. Professor Westermarck says that: "As the number five became a magic means of protection from the number of the fingers, so did what is round or curved from the shape of the eye." The curved tusks of wild boars, and lions' claws, are popular as amulets. "The Jews in south Morocco make silver amulets representing a half moon," and ancient Punic inscriptions contain

[2] Westermarck, "Sex år i Marocko," p. 206.

figures clearly intended to afford protection against the evil eye, which present the eye in the form of a half moon, with the pupil either adhering to it or detached.[3]

These facts lead one's thoughts to other forms of sound-holes. Students of musical instruments have devoted no more attention to the triangle of three small holes than to the cross. But such triangular groups of sound-holes are by no means rare, and often occur in pairs (∴ ∴), as, for instance, in an eighth century *rebec*,[4] a crwth-like instrument in Charles the Bald's Bible, from the ninth century[5] (see Fig. 81), an instrument in the ninth century Lothair Psalter,[6] a thirteenth-century Moorish guitar,[7] a fifteenth-century guitar,[8] a Finnish bowed-harp,[9] the *kissar*,[10 & 11] and ornaments on a Persian *tamboura*, *bouzourk*,[12] and a twelfth-century *fiddle*.[13]

Points forming triangles and related figures have been subjected to the same interpretations as the cross. The "triad" is also to be regarded as a solar symbol. But Professor Westermarck's explanation of this group of

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[3] Westermarck, "Sex år i Marocko," p. 230, f. Cf. the *kissar*, Fig. 95, with crescents, hand, and two superimposed triangles.

[4] Schlesinger, "The Precursors of the Violin Family," p. 403.

[5] Schlesinger, op. cit., p. 337. See also "Encycl. Brit.," s.v. Crowd, p. 513. (Editor.)

[6] Schlesinger, op. cit., Pl. V.

[7] Schlesinger, op. cit., p. 243.

[8] Schlesinger, op. cit., p. 258.

[9] Fig 11, No. 3.

[10] Rühlmann, "Die Geschichte der Bogeninstrumente," p. 8.

[11] Fétis, "Histoire Générale," II, p. 133.

[12] Engel, "The Music of the Most Ancient Nations," p. 52.

[13] Schlesinger, op. cit., p. 473.

ornaments deserves consideration, and gains in probability in proportion as the protective significance of the cross is recognised.

The same theory also provides a thoroughly satisfactory interpretation for the crescent-shaped sound-holes. Doubt was expressed above as to Professor Sachs's theory of the "bridge" over a round, central hole, and it is just as easy to suppose that the two crescent-shaped sound-holes were the earlier stage, and evolved into the big, round hole, the "bridge" being removed when the hole had lost its original significance. The fact that both the crescent-shape and the circular hole in the middle were retained as sound-holes, may have been due to an early difference of opinion as to which shape produced the better acoustic effect.

The S- or F-shaped sound-holes of the violin must also be considered in this connection. Professor Sachs says that they are inherited from the sixteenth century, when they were used on the lyre and viola da braccia.[14] As ornaments, however, their age is much greater. They frequently occur in combination with other symbols, especially on Celtic remains, such as coins, images of the gods,[15] etc., as well as in Scandinavian rock-carvings,[16] and Punic

[14] "Reallexikon," s.v. F. Löcher.

[15] Dr. Uno Holmberg has called the author's attention to the Celtic S-symbols, and kindly given some references. Cf. Macculloch, "The Mythology of All Races," III, Celtic, Pl. II, III, IV, XIX.

[16] A good collection of rock-carvings is given in George F. Floms, "South Scandinavian Rock-Tracings," Scandinavian Study, VII, No. 1, Nov., 1921.

inscriptions.[17] S-shaped sound-holes occur on a number of bowed-harps, though here they are probably not original (Figs. 39-43), Norwegian langeleiks,[18] and Swedish hummels.[19] The instrument carved in Amiens Cathedral (Fig. 84) is probably the oldest instance of sound-holes in this form. It is interesting that in later days they were specially connected with the violin family. In view of the fact that the S as ornament seems to belong especially to Celtic objects, there may be some support here for the view suggested above that the bowed-harp was of Celtic origin.

The eyes found on Grecian lyres have also been interpreted as protective marks, and if they are so, they afford additional support for the protective significance of cross-shaped sound-holes. Perhaps most kinds of sound-holes can be traced back, by the different routes that have now been indicated, to ornamentation which is connected with the idea of the sacredness of musical instruments.

The question of sound-holes is intimately connected with several of the central problems of ancient ornamentation, and thus leads far beyond the bounds of a study of musical instruments. Further light might perhaps be gained from a closer investigation of ancient remains, especially those of the Bronze and Iron Ages. The Scandinavian rock-carvings, like those of England and Scotland, contain all the figures mentioned above, and others closely related to them, and furnish abundant material

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[17] Westermarck, "Sex år i Marocko," p. 233.

[18] Nord. Mus., Fett, catalogue.

[19] "Nord Mus.," 73, 199; 31, 933.

which has not yet been fully studied. What has here been said may go to show that these figures, so insignificant in themselves, contain the kernel of an important ethnological question.

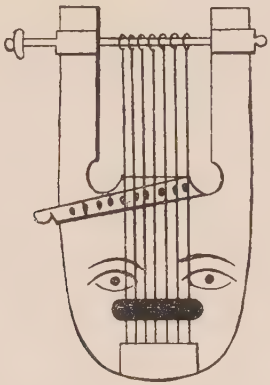

Fig. 115. Grecian lyre. From N. H. Willemin, "Choix de costumes civiles et militaires des peuples de l'antiquité."

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